

ATTACHMENT C

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
PLANNING, RULE DEVELOPMENT, AND AREA SOURCES**



FINAL

**PM10 REDESIGNATION REQUEST AND
MAINTENANCE PLAN FOR THE SOUTH
COAST AIR BASIN**

December, 2009

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CONTENTS

1.0 PURPOSE

2.0 REDESIGNATION REQUEST

3.0 PM10 MAINTENANCE PLAN

4.0 SUMMARY CHECKLIST

Attachment 1 Data Certifications

**Attachment 2 Time Series of Preliminary Continuous Monitored
PM10 24-Hour Average Concentrations (2005-2007)**

Attachment 3 Preliminary 2007 Continuous PM10 Monitoring Data

Attachment 4 PM10 Attainment Demonstration

**Attachment 5 U.S. EPA Approval of the South Coast Air Basin PM10 State
Implementation Plan**

List of Tables

Table 2-1	Air Quality Monitoring Network Review Summary	8
Table 2-2	South Coast Air Basin Certified PM10: 2005-2007	9
Table 2-3	Summary of Glendora and Mira Loma TEOM PM10 Continuous Monitoring Data	14
Table 3-1	2007 AQMP Updated Basin Annual Average Day Baseline Emission Inventories (TPD)	21
Table 3-2	2007 AQMP Updated Basin PM10 Attainment Annual Average Day Baseline Emission Inventory (TPD) By Particulate Category	22
Table 3-3	PM10 Observed and Predicted Concentrations	23
Table 3-4	2003 AQMP PM10 Basin Transportation Conformity Emissions Budget for 2003, 2006 and Post Attainment Years (Annual Average Emissions in TPD)	24
Table 3-5	Summary of Predicted 24-Hour Average PM10 Concentrations Assuming an 20 TPD Increase in Baseline Basin PM10 Emissions	26
Table 4-1	Summary Checklist of Document References	30

List of Figures

Figure 1-1	Basin Maximum 24-hour Average PM10 Concentration (1998-2007)	2
Figure 2-1	Quarterly Average Basin Rainfall Measured at Downtown Los Angeles	10
Figure 2-2	Quarterly Average Wind Speed Measured at Ontario Airport	10
Figure 2-3	Standardized Annual Average Basin Daily Maximum PM10 Potential	11
Figure 2-4	District 24-Hour Average Glendora TEOM Continuous PM10 (2005-2007)	13
Figure 2-5	District 24-Hour Average Mira Loma TEOM Continuous PM10 (2005-2007)	13
Figure 2-6	Comparison of the 2005-2007 24-Hour Average Rubidoux TEOM Continuous PM10 Concentrations with the FRM Selective Sized Inlet (SSI) Filter PM10 Measurements	15

1.0 PURPOSE

The South Coast Air Basin (Basin) is currently designated as serious nonattainment area for 24-hour average PM10. Under the Federal Clean Air Act (CAA), an area can be redesignated as attainment if, among other requirements, the U.S. Environmental Protection Agency (U.S. EPA) determines that the national ambient air quality standards (NAAQS) have been attained. The NAAQS allows for one exceedance of the 24-hour average PM10 standard per year averaged over a three consecutive calendar year period measured at each monitoring site within an area based on quality assured Federal Reference Method (FRM) air quality monitoring data.

The Basin has not violated the federal 24-hour PM10 standard ($150 \mu\text{g}/\text{m}^3$) during the period including 2004 through 2007. Figure 1-1 depicts the recent trend of Basin maximum 24-hour average concentrations for the period 2004 through 2008. Analysis of the monitoring data indicates that the Basin has not violated the 24-hour PM10 standard in 2008. Prior to 2006, elevated PM10 events have associated with high wind driven dust storms, and wildfires were not flagged for exclusion from the NAAQS. Since 2006, dust storms, wildfires and fireworks impacted observations have been flagged, documented and excluded from NAAQS determination under U.S. EPA's Exceptional Events Policy. Per the criteria specified in the NAAQS, the Basin has been in compliance with the 24-hour PM10 standard from 2006 (based on 2004-2006 data) and has maintained compliance since. More specifically, this redesignation request is based on the last complete three-year period of PM10 monitoring data including 2005, 2006 and 2007. Accordingly, the purpose of this document is to revise the previous PM10 State Implementation Plans (SIP) to request redesignation of the Basin to attainment for PM10 and to submit the attendant maintenance plan and other required actions to qualify for such redesignation by U.S. EPA.

The draft version of this document was made available for public review and comment on October 30, 2009. The South Coast Air Quality Management District (District) coordinated with other agencies for input and additional comments and has made changes in response to the comments in the final PM10 redesignation request and proposed maintenance plan, accordingly. As part of the public process, regional Public Hearings were held in each of the four counties in the District jurisdiction during the week of December 15-18, 2009.

As noted in Section 3.1 of the maintenance plan, at the request of the California Air Resources Board (CARB), the proposed transportation conformity emissions budget has been withdrawn from the final plan. CARB will provide the revisions to the Basin transportation conformity emissions budget for consideration by the

state board in the first quarter of 2010. As required by law, the proposed revised transportation conformity emissions budget will be noticed 30 days prior to the CARB Public Hearing.

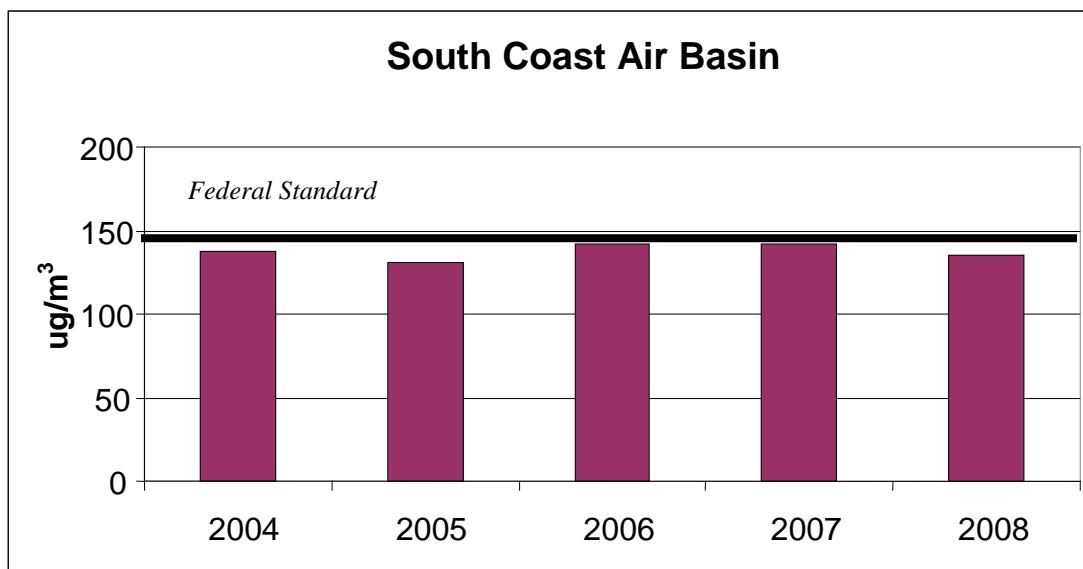


FIGURE 1-1

Basin Maximum 24-hour Average PM10 Concentration: 2004 through 2008
(Excluding U.S. EPA Concurred Exceptional Events in 2006 and 2007)

2.0 REDESIGNATION REQUEST

The District is requesting redesignation of the Basin from serious nonattainment to attainment of the PM10 NAAQS under CAA Section 107 (d)(3)(E) protocol.

Section 107 (d)(3)(E) of the CAA requires the U.S. EPA administrator to make five findings prior to granting a request for redesignation:

1. The U.S. EPA has determined that the NAAQS have been attained.
2. The applicable implementation plan has been fully approved by U.S. EPA under section 110(k).
3. The U.S. EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions.
4. The State has met all applicable requirements for the area under Section 110 and Part D.
5. The U.S. EPA has fully approved a maintenance plan, including a contingency plan, for the area under Section 175A.

As described in the previous section of this document, PM10 air quality in the Basin, excluding exceptional events, has not violated the NAAQS for the past decade. Section 2.1.1 provides the confirmation that the Basin 2005-2007 PM10 FRM air quality data is certified, has met quality assurance requirements and has attained the NAAQS. (Certification letters are provide in Attachment 1). The section offers a supplemental discussion of the three years' annual meteorological profiles with reference to long-term climatic mean conditions as well as trends in vehicle miles traveled to further characterize PM10 air quality in light of weather variability and regional growth. Section 2.1.2 presents the 2005-2007 Basin PM10 air quality based on "real-time" Beta Attenuation Monitor (BAM) and Tapered Element Oscillating Microbalance (TEOM) data. The BAM and TEOM monitors are not designated as federal equivalent monitors (FEM) and as such, the data acquired from the samplers is not used as the basis of the attainment demonstration. The data, however, does support the FRM NAAQS attainment finding. Furthermore, the BAM and TEOM monitors will provide daily PM10 sampling to support the monitoring requirements specified in the maintenance plan presented in Sections 3.2 and 3.3. Combined, these analyses satisfy finding number 1 of CAA Section 107.

Sections 2.2 and 2.3 characterize the Basin PM10 SIP and provide reference to U.S. EPA's approval of the 2003 SIP including the rules defining the permanent and enforceable emissions reductions. Sections 2.4 and 2.5 address the applicable requirements under Section 110 Part D and preface the requirements for a

maintenance plan. Together these sections directly address and satisfy findings (2, 3, 4 and 5) of CAA Section 107.

The following paragraphs provide the additional information necessary for the U.S. EPA to make the above findings.

2.1 Attainment of the Standard

According to U.S. EPA guidance, the demonstration of attainment with the PM10 standard must rely on three complete, consecutive calendar years of quality-assured air quality monitoring data collected in accordance with 40 CFR 50, Appendix J. The NAAQS allows for one exceedance of the 24-hour PM10 standard per year averaged over a three consecutive calendar year period.

2.2.1 Monitoring Network and Data Certification

The District operates nineteen (19) air quality monitoring stations in the Basin where PM10 is monitored in accordance with 40 CFR 50, Appendix J. The 19 stations are components of the twenty one station PM10 District monitoring network that is designed to meet the program requirements of National Air Monitoring Stations (NAMS) and State and Local Air Monitoring Stations (SLAMS) and to provide special monitoring in support of air quality research and health studies. PM10 monitoring is conducted at each station using FRM high volume filter samplers with a size selective inlet. Each station is designated on the basis of the major program requirements as well as the monitoring objective and the representative spatial scale of sampling. Table 2-1 lists the 19 air monitoring stations that sample PM10 in the Basin, provides the U.S. EPA Aerometric Informational Retrieval System (AIRS), and California Air Resources Board (CARB) identification numbers, the District identification code, as well as the equipment designation, monitoring objectives and monitoring scales. The PM10 monitoring data are subjected to validation and are submitted to CARB and U.S. EPA for inclusion in the AIRS data base.

As required by Federal Regulations (40 CFR Part 58), the District conducts an annual review of the air quality monitoring network that is forwarded to ARB and U.S. EPA for evaluation. In addition, the District provides annual certification to U.S. EPA to confirm that the data has been monitored and validated in accordance with Federal Regulations and that they are complete and accurate. Certification letters to U.S. EPA for the 2005-2007 monitoring years are provided as Attachment-1 to this document.

2.1.2 Certified Ambient PM10 Air Quality: 2005 - 2007

Table 2-2 provides a summary of the certified ambient PM10 data measured in the Basin by the District for the period including 2005 through 2007. Listed for each station are the number of days of valid data, the annual maximum 24-hour average concentration, the annual number of days exceeding the federal standard and the consecutive three-year total number of days exceeding the standard for the 2005–2007 time period. During the three year period (2005-2007), the PM10 24-hour standard was not exceeded in the Basin. The location of the maximum measured PM10 concentration varied in each of the three years. The 2005 annual maximum concentration of 131 $\mu\text{g}/\text{m}^3$ was measured at the South Coastal LA County-2 monitor in the city of Long Beach. The annual maximum concentrations for the following two years occurred at the Central San Bernardino Valley-1 monitor in the city of Fontana in 2006 and at the Mira Loma air monitoring station in 2007. The peak 24-hour average concentration measured in each year was 142 $\mu\text{g}/\text{m}^3$. Data from three days in 2007 were flagged for exceptional events exclusion including: April 12th at Perris (“Santa Ana” high wind event), July 5th at the East San Gabriel Valley-1 and Central San Bernardino Valley-1 sites (following the Independence Day regional fireworks), and October 21st (high winds and wildfire event). Documentation supporting the exceptional event exclusions has been publicly noticed and submitted to the California Air Resources Board (CARB) for review and forwarding to US EPA Region IX for a concurrence determination.

The Basin PM10 24-hour and annual average concentration profiles have been extensively characterized in the 2007 Air Quality Management Plan (AQMP). The primary 24-hour average PM10 impact occurs in the eastern portion of the Basin in areas subjected to fugitive dust from agricultural and dairy activities and secondary aerosol formation. The stations that typically report the highest 24-hour average PM10 values include Rubidoux, Mira Loma, Perris, and Central San Bernardino Valley 1 (Fontana). Approximately 56 percent of the average peak PM10 mass is attributable to the fine portion (PM2.5) of the total mass and the coarse portion, which is dominated by fugitive dust, accounts of the remaining 44 percent. When averaged for all Basin PM10 monitoring stations during the 2005-2007 period, the annual daily peak concentration was approximately 25 percent higher than the second highest measurement.

The highest PM10 concentrations observed in the Basin are associated with “Santa Ana” high wind events, wildfires, and national holiday fireworks demonstrations. These days are typically flagged as natural or exceptional events. Santa Ana high wind events occur between five and ten times a year. Peak values of PM10 in the Basin associated with Santa Ana wind conditions occur in the spring and fall as surface high pressure builds into the Great Basin (Northern Nevada) in the wake of dry migratory weather systems moving through southern California. In the fall,

the high winds accompanied by single digit humidity are also primary contributors to wildfire events.

The beneficial impacts of rainfall to Basin PM10 are twofold: frequent measurable rainfall scavenges aerosol particles and wet soil minimizes fugitive dust entrainment. Figure 2.1 depicts the quarterly average Basin rainfall for 2005-2007 and the preceding 15-years (1985-2004). The 2005-2007 second quarter spring rainfall roughly doubled the long term average giving rise to a lower than average potential for fugitive dust. Spring rains in 2005 contributed significantly to the lower average PM10 potential. In contrast, average rainfall during the fall quarter of 2005-2007 was significantly lower than average and as a consequence wildfire activity increased, particularly in 2005 and 2007. On balance, rainfall during 2005-2007 in the Basin did not significantly alter the average potential for higher 24-hour average concentrations of PM10.

Average wind speeds measured at Ontario Airport, located in the eastern half of the Basin, provide a second measure of the Basin daily PM10 potential. Higher average winds are indicative of more frequent fugitive dust events. Overall, the 2005-2007 annual 24-hour average surface wind speed of 6.2 mph at Ontario was equal to the 1996-2004 historical average. Hourly winds speeds at Ontario have been measured by the National Weather Service (NWS) as part of their Automated Surface Observation System (ASOS) since 1996. Basin winds in the winter quarter (Figure 2-2) for 2005-2007 were higher than the long term average however, these were concurrent with higher than average rainfall and thus had little impact for enhanced fugitive dust emissions. Spring and summer wind speeds were consistent with the long term average while winds for fall were below average, leading to stagnation and greater photochemical aerosol formation potential.

As a component of the PM10 attainment demonstration provided in the 1997 AQMP, classification and regression tree analysis (CART) was used to categorize the daily PM10 readings measured at the Rubidoux air monitoring station. The CART analysis was used as the foundation of an index to define the daily PM10 formation potential solely using meteorological variables. (The meteorological variables evaluated stagnation potential, and did not specifically include wind speed or rainfall). The daily index was aggregated into a standardized annual value and calculated for the years PM10 has been monitored in the Basin (Figure 2-3) to provide a tool for comparing annual variations in PM10 potential. An index of 0.0 represents an average year.

The standardized index for 2005 was slightly lower than average indicating less potential. However, the 2006 index was essentially average and 2007 was nominally higher than average. Taken together as a three-year period, 2005-2007 was essentially average compared to the long-term trend. (Note: the two periods in

the standardized trend that exceed “-2” in index value were significantly strong “El Nino” weather events that were characterized by enhanced regional dispersion).

Overall, the three measures of meteorological potential (rainfall, wind and stagnation) of Basin PM10 formation indicate that the 2005-2007 period was consistent with the long-term average and did not contribute to lowering peak particulate concentrations.

Profiles of daily vehicle miles traveled (VMT) in the Basin are provided by CARB’s EMFAC2007 emissions model. The EMFAC2007 data indicated that daily VMT decreased nominally from 394 million miles in 2005, to 381 million miles in 2006 to 368 million miles in 2007. Future year estimates of VMT using 2005 as a base year, project a growth pattern for the Basin of approximately five (5) percent out to 2020 and fifteen (15) percent out to 2030.

Based on the criteria specified in the CAA (which allows for one violation at one location in three consecutive years) the Basin has attained the federal standard. Furthermore, the analysis shows that the finding of attainment was not biased by favorable weather or unusual variations in annual VMT during 2005 through 2007.

2.1.3 Basin PM10 Air Quality From District Operated Continuous Monitors

The District has operated a network of continuous “real-time” PM10 BAM and TEOM monitors in the Basin for more than a decade. The instruments are co-located with the FRM monitors at ten of the monitoring stations. Although these monitors are considered an equivalent monitoring methodology to the FRM, the District relies solely on the FRM for compliance determination with the federal and California PM10 standards. The primary functions of the TEOMs and BAM are to measure real-time PM10 concentrations to inform the public and for the issuance of health based PM10 advisories. The continuous monitoring data provide supporting documentation for compliance and enforcement activities under District Rule 403. The data acquired from the network also provides supporting documentations of exceptional PM10 events and assists in the characterization of the long-term trends of air quality in the Basin.

While the TEOM and BAM monitoring instruments are routinely calibrated, subjected to flow checks and are subject to an annual audit, extensive screening of the hourly data is not as rigorously performed as for the FRM data. As a consequence, isolated hourly concentrations reading zero or depicting substantial shifts in concentration or “spikes” from one hour to the following hour are not flagged or extracted from the data stream.

TABLE 2-1

South Coast Air Basin PM10 Air Quality Monitoring Network Review Summary

Monitoring Location	AQS Station No.	ARB Station No.	SCAQMD Site Code	Equipment Designation	Objective*	Spatial Scale**
Los Angeles County						
Central LA	060371103	70087	CELA	SLAMS	RC	NS
Southwest Coastal LA County	060375001	70094	HAWT	SLAMS	RC	MS
South Coastal LA County 1	060374002	70072	LGBH	SLAMS	HC	MI
South Coastal LA County 2	060374004	70110	SLGB	SLAMS	HC	MI
East San Fernando Valley	060371002	70069	BURK	SLAMS	HC	NS
East San Gabriel Valley 1	060370002	70060	AZUS	SLAMS	RC	NS
Santa Clarita Valley	060376012	70090	SCLR	SLAMS	RC	NS
Orange County						
Central Orange County	060590001	30176	ANAH	NAMS	RC	NS
Saddleback Valley 1	060592022	30812	MSVJ	SLAMS	RC	NS
Riverside County						
Norco/Corona	060650003	33155	NORC	SLAMS	RC	NS
Metropolitan Riverside County 1	060658001	33144	RIVR	SLAMS	HC	NS
Mira Loma	060658005	33165	MLOM	SPECIAL	HC	NS
Perris Valley	060656001	33149	PERI	SPECIAL	RC	NS
Banning Airport	060650012	33164	BNAP	SPECIAL	RC	NS
San Bernardino County						
Southwest San Bernardino Valley	060710025	36025	ONFS	SPECIAL	HC	NS
Central San Bernardino Valley 1	060712002	36197	FONT	NAMS	HC	NS
Central San Bernardino Valley 2	060719004	36202	SNBO	NAMS	RC	NS
East San Bernardino Valley	060714003	36203	REDL	NAMS	RC	NS
Central San Bernardino Mountains	060710005	32181	CRES	NAMS	RC	NS

* RC - Representative Concentrations, HC - High Concentrations

** MI - Microscale, MI - Middle Scale, NS - Neighborhood Scale

TABLE 2-2

South Coast Air Basin Certified PM10: 2005-2007

Monitoring Location	Maximum 24-Hour Average Concentration (µg/m ³)			Number of Samples			Number of Days Exceeding Federal 24-Hour Average Standard (≥150 µg/m ³)			Three-Year Total Number of Days Exceeding the Standard
	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005-2007
Los Angeles County										
Central LA	70	59	78	61	59	56	0	0	0	0
Southwest Coastal LA County	44	45	128	54	51	56	0	0	0**	0
South Coastal LA County 1	66	78	75	59	61	57	0	0	0	0
South Coastal LA County 2	131	117	123	59	58	29*	0	0	0	0
East San Fernando Valley	92	71	109	61	54	27*	0	0	0	0
East San Gabriel Valley 1	76	81	83	55	58	55	0	0	0+	0
Santa Clarita Valley	55	53	131	60	58	57	0	0	0**	0
Orange County										
Central Orange County	65	104	75	61	56	58	0	0	0**	0
Saddleback Valley 1	41	57	74	55	50	57	0	0	0	0
Riverside County										
Norco/Corona	79	74	93	58	57	58	0	0	0	0
Metropolitan Riverside County 1	123	109	118	123	118	116	0	0	0**	0
Mira Loma	--	124	142	--	59	55	--	0	0	N/A
Perris Valley	80	125	120	60	54	57	0	0	0**#	0
Banning Airport	76	75	78	58	55	48*	0	0	0	0
San Bernardino County										
Southwest San Bernardino Valley	74	78	115	60	62	58	0	0	0**	0
Central San Bernardino Valley 1	108	142	111	60	60	56	0	0	0**+	0
Central San Bernardino Valley 2	72	92	136	60	57	57	0	0	0**	0
East San Bernardino Valley	61	103	97	58	60	60	0	0	0	0
Central San Bernardino Mountains	49	63	89	56	58	46*	0	0	0	0

* Less than 12 months of data

Flagged Exceptional Events

** October 21, 2007 Southern California Wildfires

April 12, 2007 "Santa Ana" high winds event where localized wind gusts 40 mph and sustained hourly winds exceeded 30 mph

+ July 5, 2007 following Fourth of July fireworks demonstrations.

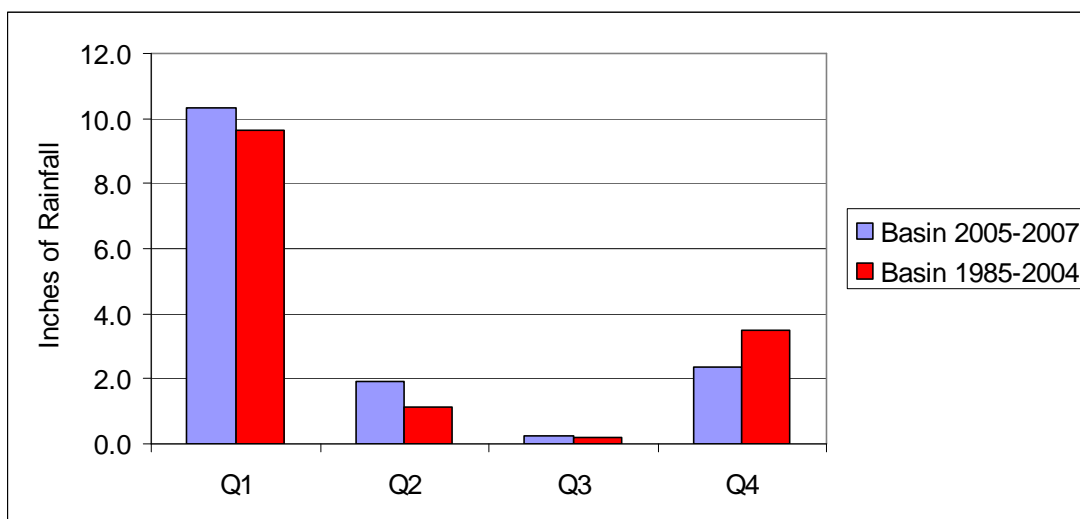


FIGURE 2-1

Quarterly Average Basin Rainfall Measured at Downtown Los Angeles

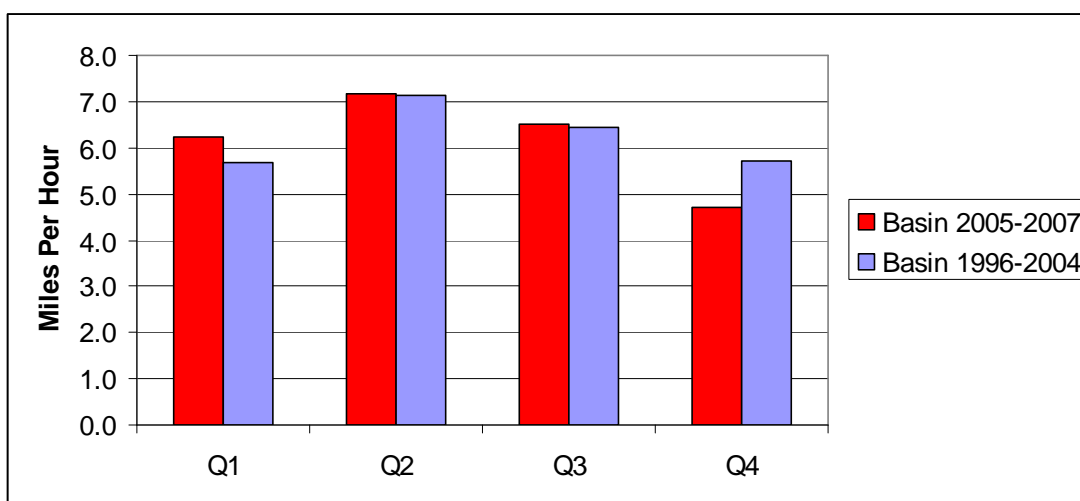


FIGURE 2-2

Quarterly Average Wind Speed Measured at Ontario Airport

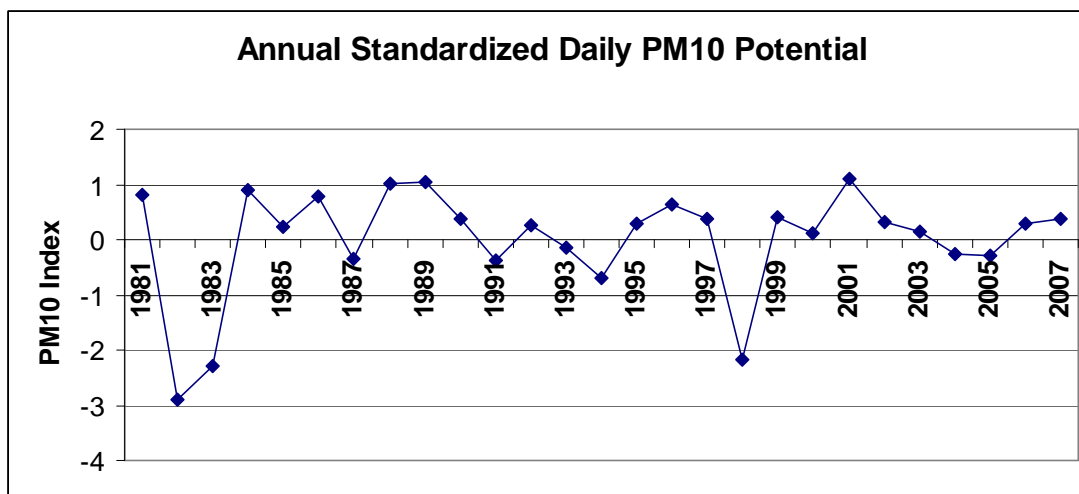


FIGURE 2-3

Standardized Annual Average Basin Daily PM₁₀ Potential

For this supporting analysis, two cursory data screening tests were applied to each TEOM and BAM hourly data set: First, all hours having zero concentration were set to missing and excluded from the 24-hour average calculation. Second, the 3-year standard deviation of the hourly data was calculated (all hours), then multiplied by a factor of six to provide an extreme benchmark to evaluate and compare spikes in consecutive hourly data values. If the change between hours exceeded 6 standard deviations then the latest hour was excluded from the analysis. This analysis mainly targets random fluctuations in the 24-hour PM₁₀ profile rather than high wind events characterized by multiple successive hours of elevated concentrations. The greatest standard deviation of any station for the 2005-2007 hourly PM₁₀ data was calculated to be 35 $\mu\text{g}/\text{m}^3$ at Mira Loma, and the 6-standard deviation benchmark was set at 210 $\mu\text{g}/\text{m}^3$. A valid daily 24-hour average concentration required 18 hours of data (75 percent rule) to be included in the assessment.

Figures 2-4 and 2-5 depict the trend of 24-hour average concentration for PM₁₀ at Glendora and Mira Loma, respectively for the period including January 1, 2005 through December 31, 2007. Overall, Basin maximum PM₁₀ concentrations (highest reading observed at the daily ten real-time stations) using the continuous monitors exceeded the federal standard on only seven days during the three year period. The TEOM data monitored at Glendora and Mira Loma captured five of the seven days when PM₁₀ concentrations exceeded the standard during the three year period. The Glendora TEOM registered PM₁₀ 24-hour averages exceeding the federal standard in 2005 and 2006 on July 5th (Julian day number 186) following fireworks displays that occurred after sunset on the July 4th national

holiday. PM10 concentrations on July 5, 2007 reached $135 \mu\text{g}/\text{m}^3$. Concentrations exceeded $150 \mu\text{g}/\text{m}^3$ at Mira Loma on two days: (1) December 2, 2006 during a local brush fire documented by the county fire department and (2) during a Santa Ana high wind dust storm and concurrent wildfire event that occurred on October 21-22, 2007. In each case, the data from the days exceeding the standard would qualify as candidates for exceptional event exclusion. The additional two days having TEOM measurements that exceeded the federal standard included July 5, 2007 (fireworks at Upland and Rubidoux) and December 25, 2007 when a brief, but strong Santa Ana generated elevated levels of wind blown fugitive dust at Rubidoux. The three year trends of daily 24-hour averaged PM10 measured at the continuous monitoring sites are proved in Appendix-2.

Table 2-3 summarizes the exercise if U.S. EPA's criteria for calculating the expected number of days that would exceed the 24-hour standard had been applied to the Glendora and Mira Loma data. As indicated, without screening for exceptional events, both sites would be projected to have less than one day per year with 24-hour average concentrations exceeding $150 \mu\text{g}/\text{m}^3$. If the days identified as exceptional events were excluded, the tally would be zero days in the three year period for each station.

Figure 2-5 provides the 2005-2007 data correlation between the TEOM PM10 24-hour average concentrations and the corresponding filter based FRM measurements for Rubidoux (excluding the exceptional event). The correlation coefficient between the two measurement techniques is 0.84 ($R^2 = 0.704$) with the TEOM exhibiting a tendency for under estimating the upper end of the PM10 distribution. Given the instruments are based on fundamentally different technologies and do not share a common intake manifold, the correlation is strong for ambient air quality monitoring. (Preliminary 24-hour average TEOM and BAM concentrations for 2007 are provided for each Basin continuous monitoring site in Attachment-3 of this document).

The results of this analysis support the FRM data analysis that the Basin has met the 24-hour average federal standard for the period 2005-2007. Furthermore, the analysis provides confidence that the real-time TEOM and BAM monitors will be reliable and can meet the requirement for daily PM10 monitoring prescribed by the Clean Air Act.

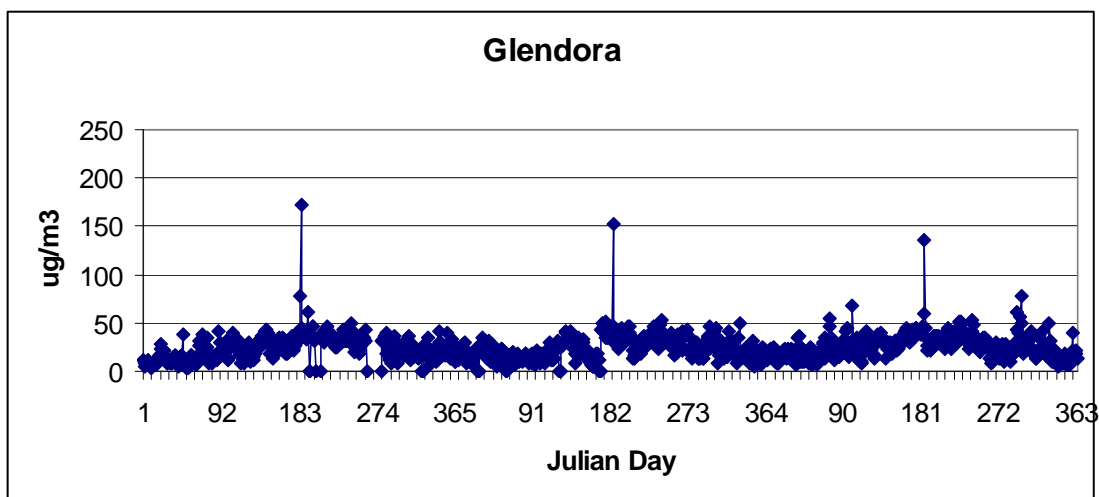


FIGURE 2-4

District 24-Hour Average Glendora TEOM Continuous PM10 (2005-2007)

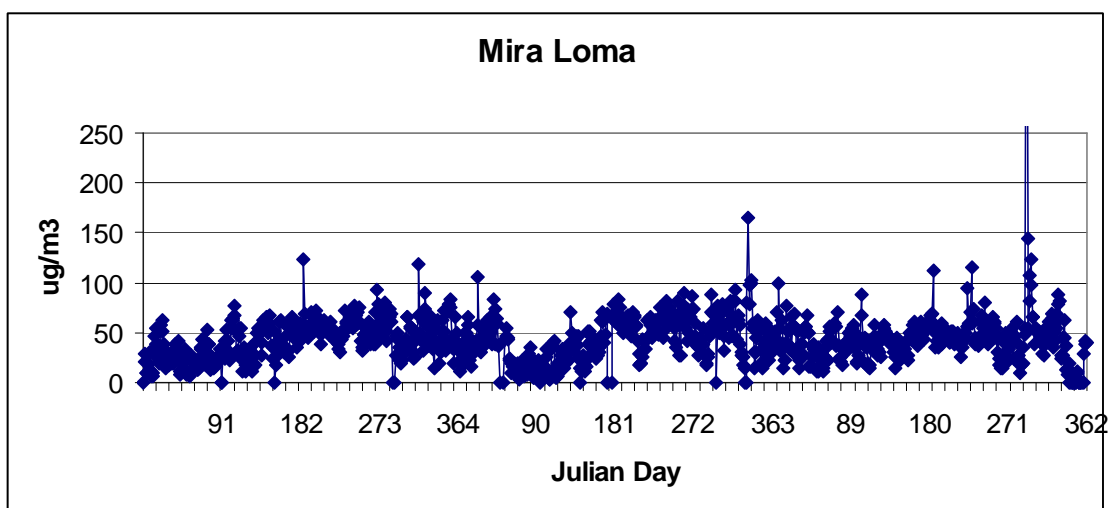


FIGURE 2-5

District 24-Hour Average Mira Loma TEOM Continuous PM10 (2005-2007)

TABLE 2-3

Summary of Glendora and Mira Loma TEOM PM10 Continuous Monitoring Data

Year	Quarter	Days Complete Data	Normal	No. Days > 150 µg/m3	Expected Exceedances	No. Exceptional	Expected Exceedances Excluding Exceptional Events
Glendora TEOM							
2005	1	90	90	0	0	0	0
	2	91	91	0	0	0	0
	3	73	92	1	1.26	1	0
	4	91	92	0	0	0	0
2006	1	86	90	0	0	0	0
	2	87	91	0	0	0	0
	3	92	92	1	1.00	1	0
	4	92	92	0	0	0	0
2007	1	90	90	0	0	0	0
	2	91	91	0	0	0	0
	3	92	92	0	0	0	0
	4	92	92	0	0	0	0
Total					2.26		0
3-Year Average					0.75		0
2005	1	90	90	0	0	0	0
Mira Loma TEOM							
Year	Quarter	Days Complete Data	Normal	No. Days > 150 µg/m3	Expected Exceedances	No. Exceptional	Expected Exceedances Excluding Exceptional Events
2005	1	89	90	0	0	0	0
	2	89	91	0	0	0	0
	3	92	92	0	0	0	0
	4	89	92	0	0	0	0
2006	1	84	90	0	0	0	0
	2	83	91	0	0	0	0
	3	92	92	0	0	0	0
	4	89	92	1	1.03	1	0
2007	1	90	90	0	0	0	0
	2	91	91	0	0	0	0
	3	92	92	0	0	0	0
	4	78	92	1	1.18	1	0
Total					2.21		0
3-Year Average					0.74		0

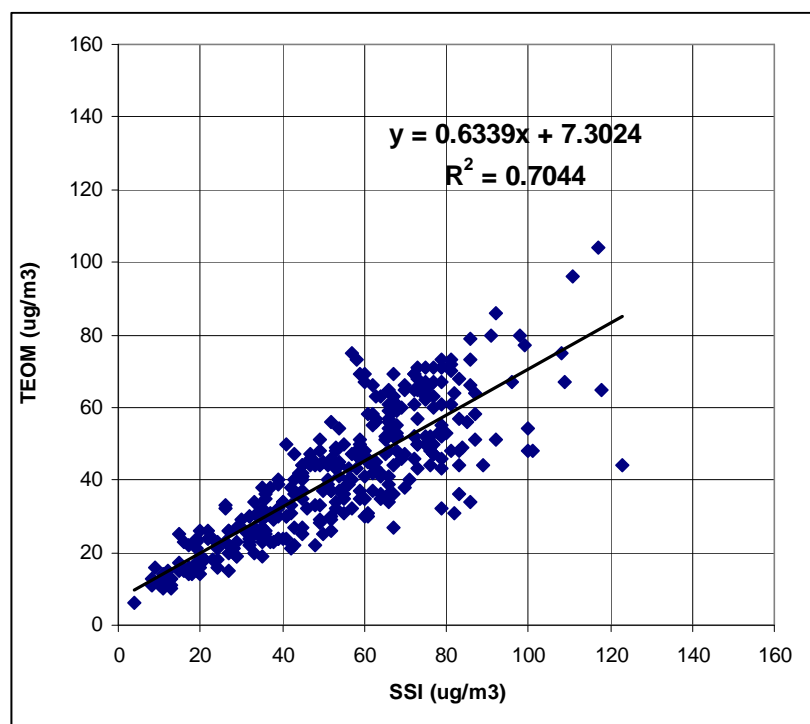


FIGURE 2-6

Comparison of the 2005-2007 24-Hour Average Rubidoux TEOM Continuous PM10 Concentrations with the FRM Selective Sized Inlet (SSI) Filter PM10 Measurements

2.2 Basin PM10 State Implementation Plan

On November 14, 2005, U.S. EPA approved the 2003 State Implementation Plan (SIP) submitted by the State of California to provide for the attainment of the PM10 NAAQS for the Basin (Federal Register, November 14, 2005 [Volume 70, Number 218], pp. 69081-69085). Based on this approval, finding number 2 of the CAA Section 107 requirements for an approved implementation plan under CAA Section 110(k) is therefore satisfied.

The initial 1991 Basin PM10 plan provided a blueprint for dust control containing measures to address fugitive emissions from paved and unpaved roads, agricultural and construction/demolition activities and open area wind erosion. The plan was subsequently revised in 1994, 1997, and 2003 to provide control program enhancements and CAA requirements for an extension of the PM10 attainment date to 2006. (Note: while Basin 24-hour average concentrations of PM10 were meeting the federal standard, annual average concentrations were in excess of the respective standard. U.S. EPA revoked the annual PM10 standard in 2006). The 2003 AQMP included enhancements to the District dust program including revisions to existing Rules 403 Fugitive Dust (2004), and 1186 PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations (2004).

Several additional control measures in the 2003 AQMP that addressed directly emitted and precursor emissions that contribute to primary and secondary PM10 formation, have since been adopted as District rules. These include rules: 1105.1 -- Reduction of PM10 and Ammonia Emissions from Fluid Catalytic Cracking Units (2003); 1118 -- Control of Emissions from Refinery Flares (2005); 1127 -- Emissions Reductions From Livestock Waste (2004); 1133.2 -- Emissions Reductions From Co-Composting Operations (2003); 1156 -- PM₁₀ Emission Reductions from Cement Manufacturing Facilities (2005); and 1157 -- PM₁₀ Emission Reductions from Aggregate and Related Operations (2005).

The 2007 revisions to the Air Quality Management Plan provided an update to the Basin emissions inventory, the 8-hour ozone, annual PM2.5 and 24-hour average PM10 attainment demonstrations and transportation conformity budgets. The 2007 AQMP 24-hour average PM10 attainment demonstration indicated that the Basin would remain in attainment of the standard through 2020 and beyond. Further reductions in PM10 (approximately 14 percent) would occur by 2015 as a result of control measures being implemented to reduce regional PM2.5 concentrations to attain the federal annual average standard.

2.3 Permanent and Enforceable Emission Reductions

The Basin has attained the 24-hour PM10 standard since 2000 despite regional growth and increases in construction activities. The 2003 AQMP revision committed to a 2.2 ton per day (TPD) PM10 emissions reduction through rule adoption of new control measures by 2006 with implementation scheduled out through 2010. Implementation of the PM10 control measures were committed to achieve 1.0 TPD reduction through 2006. Similarly, the 2003 AQMP committed to emissions reduction through rule adoption of new control measures by 2006 of 2.1 TPD of SO_x (implementation through 2005), 4.0 TPD of VOC (implementation through 2006) and 5.1 TPD of NO_x (implementation in 2007). Through June 2006, rule adoption and implementation of the the 2003 AQMP control measures (listed in Section 2.2) had resulted in 2.4 TPD of PM10, 3.8 TPD SO_x, and 8.2 TPD of VOC of permanent and enforceable emission reductions.

2.4 Section 110 and Part D Requirements

CAA section 107(d)(3)(E) requires that U.S. EPA determine that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP and/or applicable federal measures. CAA section 110 contains the general requirements for SIPs and Part D specifies additional requirements applicable to nonattainment areas. Both Section 110 and Part D describe the elements of a SIP and include, among other things, emission inventories, a monitoring network, an air quality analysis, modeling, attainment demonstrations, enforcement mechanisms, and regulations which have been adopted by the State to attain or maintain the NAAQS.

In its rulemaking on the PM10 portion of the 2003 AQMP, U.S. EPA fully approved the applicable requirements for the Basin (Federal Register: November 14, 2005 [Volume 70, Number 218], pp. 69081-69085). Thus, the State has met all SIP requirements applicable to the area under section 110 and part D, as required by CAA section 107(d)(3)(E).

2.5 Maintenance Plan

The District is submitting its Basin PM10 Maintenance Plan (Section 3.0 of this document) concurrently with this redesignation request. The District requests U.S. EPA to expeditiously review the Plan, and if determined to meet the provisions of the CAA, approve the maintenance plan as part of the redesignation process.

3.0 BASIN PM10 MAINTENANCE PLAN

Section 107(d)(3)(E) of the CAA specifies that for an area to be redesignated as attainment, the U.S. EPA must approve a maintenance plan that meets the requirements of Section 175A. The purpose of the maintenance plan is to provide for the maintenance of the 24-hour PM10 NAAQS for at least ten years after the redesignation (not ten years after the redesignation submittal). CAA Section 107 (d)(3)(D) allows the U.S. EPA Administrator up to 18 months from receipt of a complete submittal to process a redesignation request. To accommodate the U.S. EPA's review time and to be consistent with other District planning timelines, the maintenance plan will cover the period beginning U.S. EPA's approval (2010 to 2012) through the following ten years. The maintenance plan requires a maintenance demonstration, a commitment to a future monitoring network, verification of continued attainment, a contingency plan, and provisions for contingency plan implementation.

This section provides the proposed Basin PM10 Maintenance Plan. In Section 3.1, the 2003 PM10 AQMP attainment inventory and modeling demonstration as well as the transportation conformity budgets are updated to include the latest planning assumptions and emissions inventory used in the 2007 AQMP. The maintenance plan also provides a commitment to maintain a future PM10 monitoring network in the Basin to verify continued attainment of the NAAQS (Sections 3.2 and 3.3). Finally, Section 3.4 provides a contingency plan that commits the District to evaluate amending rules to further strengthen prohibitions on particulate emissions. The section also discusses the impact of implementation of adopted 2007 AQMP District and CARB measures that are projected to reduce directly emitted particulates and aerosol precursors. The Basin PM10 Maintenance Plan defined in Section 3.0 of this document meets the criteria specified in CAA Sections 107 and 175A and upon approval by U.S. EPA will complete the five findings needed for granting the Basin request for redesignation to attainment of the PM10 NAAQS.

3.1 Maintenance Demonstration

According to U.S. EPA guidance, a maintenance plan may demonstrate future maintenance of the NAAQS by either showing that future emissions will not exceed the level of the attainment inventory or by modeling to show that the future mix of sources and emissions rates will not cause a violation of the NAAQS. The District will use the second approach to demonstrate that modeling will assure future maintenance of the PM10 standards.

3.1.1 Attainment Inventory and Modeling Demonstration

The primary focus of the 2003 Basin attainment demonstration was the now revoked annual PM10 standard previously required to be attained by 2006. By 2003, the Basin had not violated the federal 24-hour PM10 standard (excluding exceptional events) for more than a decade. The update of the 24-hour PM10 standard attainment demonstration for 2006 presented in the 2003 AQMP used speciated linear rollback modeling to determine the future year PM10 concentrations at five representative Basin sites. The five sites evaluated included Anaheim, Diamond Bar, Fontana, Los Angeles and Rubidoux. Comprehensive monitoring through the PM10 Technical Enhancement Program (PTEP) provided data on the component species at each site for the year 1995. Rollback by species was conducted using the 1995 maximum 24-hour average PM10 concentration at each site to estimate 2006 and 2010 future year PM10 concentrations with and without implementation of the 2003 AQMP control program. Model output was extrapolated throughout the Basin modeling domain. The modeling demonstration also included a comprehensive grid level “hot spot” impact analysis. The 2003 AQMP attainment demonstration relied on a 1997 baseline PM10 inventory back cast to 1995 and projected for 2006 and 2010 baseline and controlled emissions. The attainment demonstration showed that with implementation of the 2003 AQMP, the federal 24-hour standard would be met by 2006 and maintained through 2010 (the attainment date for the 1-hour ozone NAAQS). As outlined in Section 2.3, the control measures proposed in the 2003 AQMP for 2006 have been fully adopted and are in effect and enforceable.

The proposed maintenance plan incorporates the 2007 AQMP’s most current update of the Basin baseline attainment emissions inventory as well as an updated modeling attainment demonstration. As with the 2003 AQMP, the 2007 AQMP inventory provides the District’s latest point and areas source emissions, as well as CARB’s EMFAC2007 updated mobile source emissions model output, and SCAG’s Interim 2007 RTP assumptions. The 2007 AQMP relies on a 2002 baseline PM10 inventory. Future-year baseline projections are provided for several milestone years including the 2002 base-year, 2006 (the 2003 AQMP attainment-year), 2008, 2010 through 2012 (the start of the maintenance period dependent upon plan approval by U.S. EPA), 2014 (the Basin attainment date for annual average PM2.5), 2020 and 2023 (bracketing the expected horizon-year), and 2030.

The 2007 AQMP PM10 attainment demonstration included efforts to control Basin PM2.5 to project future year improvements to maximum 24-hour average concentrations. As a conservative analysis, only emissions reductions associated with the PM2.5 portion of the 24-hour PM10 concentration were assumed to be impacted by future year emission controls. The 2007 AQMP analysis used the average of the 2003-2005 reported annual maximum 24-hour PM10 concentrations at each station where co-located PM10 and PM2.5 were sampled. The site specific PM2.5 fraction of the PM10 mass was determined by ratio. Site specific PM2.5 relative reductions factors (RRF),

were generated from the regional modeling analyses and then used to project the 2015 and 2020 PM2.5 reductions to the total mass due to the implementation of regional emissions controls. The projected 2015 and 2020 maximum 24-hour average maximum PM10 concentrations were estimated by adding the projected 24-hour average maximum PM2.5 concentrations to the average 2003-2005 PM10-2.5 “coarse” portion of the mass (that was held constant). The modeling methodology is discussed further in Chapter 3 of Appendix V of the 2007 AQMP.

Updated Attainment Inventory

Table 3-1 presents the updated Basin 2007 AQMP annual average day baseline emissions inventories for PM10, PM2.5, NOx, VOC and SOX. The inventory includes the 2002 base-year, 2006 (the 2003 AQMP attainment-year), 2008, 2010 through 2012 (the start of the maintenance period dependent upon plan approval by U.S. EPA), 2014 (the Basin attainment date for annual average PM2.5), 2020 and 2023 (bracketing the expected horizon-year), and 2030. Table 3-2 provides a detailed breakout of the updated baseline attainment inventory for the PM10 emission subcategories.

Future PM10 emissions are projected to nominally increase from the 2002 base-year inventory due to growth in the construction/demolition source categories offsetting emissions reductions from mobile sources. Overall, the PM10 baseline emissions inventory will increase approximately seven (7) percent from 2010 to 2020 and ten (10) percent from 2020 to 2030.

Modeling Demonstration

Table 3-3 presents the results of the updated 2007 AQMP 24-hour PM10 attainment demonstration. Whereas the 2007 AQMP used the average of the 2003-2005 daily maximum PM10 concentrations (by station) as the basis of the attainment demonstration, this update conservatively selects the highest 24-hour average PM10 concentration by county for the 2005-2007 monitoring period as the basis for projecting future year PM10. The model simulations for baseline PM10 emissions indicate that despite growth, the Basin will continue to attain the federal 24-hour PM10 standard. A comprehensive discussion of the current updated attainment modeling demonstration is provided in Attachment-4 of this document.

TABLE 3-1

2007 AQMP Updated Basin Annual Average Day Attainment Baseline Emission Inventories (TPD)

CATEGORY	2002	2006	2008	2010	2011	2012	2014	2020	2023	2030
PM10	274.7	282.8	277.5	280.9	283.0	284.8	288.7	300.3	307.8	329.6
PM2.5	99.1	104.2	101.5	101.4	101.5	101.6	101.6	103.2	105.2	113.6
NOX	1093.2	970.7	853.7	774.7	742.9	711.6	653.6	525.2	506.4	511.8
VOC	844.2	695.9	608.0	572.4	559.4	547.9	527.7	498.5	496.0	508.4
SOX	53.3	54.8	40.9	39.2	40.1	40.7	42.8	51.4	55.1	71.7

TABLE 3-2

2007 AQMP Updated Basin PM10 Attainment Annual Average Day Baseline Emission Inventory (TPD)

CATEGORY	2002	2006	2008	2010	2011	2012	2014	2020	2023	2030
Stationary-Point Sources	21.1	20.1	17.1	17.3	17.4	17.6	17.9	18.9	19.5	20.9
Construction/Demolition	39.9	46.9	49.8	52.9	54.3	55.8	58.7	66.0	69.7	78.9
Entrained Road Dust/Paved	125.4	123.5	122.3	123.4	124.0	124.5	125.8	129.3	131.1	135.2
Entrained Road Dust/Unpaved	13.6	11.5	10.3	10.3	10.3	10.3	10.3	10.2	10.2	10.2
Farming Operations	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3
Fugitive Windblown Dust	2.8	2.4	2.3	2.2	2.2	2.1	2.0	1.8	1.7	1.6
Other Area Sources	23.3	28.8	29.4	30.0	30.3	30.6	31.2	32.6	33.3	35.0
On-Road Mobile Sources	24.8	26.5	24.9	24.3	24.3	24.2	24.0	23.6	23.6	24.7
Off-Road Mobile Sources	23.1	22.5	20.7	19.9	19.6	19.2	18.4	17.4	18.1	22.7
Total PM10	274.7	282.8	277.5	280.9	283.0	284.8	288.7	300.3	307.7	329.6

TABLE 3-3

PM10 Observed and Predicted Concentrations (using baseline emissions)

Year/ Emissions Scenario	Observed County 24-hr Maximum Concentration ($\mu\text{g}/\text{m}^3$)				Predicted County 24-hr Maximum Concentration ($\mu\text{g}/\text{m}^3$)			
	Los Angeles	Orange	Riverside	San Bernardino	Los Angeles	Orange	Riverside	San Bernardino
2005	131	65	123	108				
2006	117	104	125	142				
2007	131	75	142	136				
3-Year Maximum	131	104	142	142				
2010					102	79	120	126
2011					101	79	119	125
2012					101	78	118	125
2014					102	79	117	126
2020					102	80	117	126
2023					103	81	118	128
2030					109	86	125	136

3.1.2 Transportation Conformity Requirements

The federal transportation conformity regulation requires SIPs to specify the level of on-road motor vehicle emissions that are consistent with attainment and maintenance of air quality standards. To receive federal approval and funding, transportation agencies must demonstrate that emissions from new transportation plans, programs and projects conform to these “emission budgets.”

Budget Approach

As part of its approval of the 2003 revisions to the AQMP (Federal Register: November 14, 2005 [Volume 70, Number 218]), U.S. EPA approved the Basin PM10 motor vehicle emissions budgets. The approved PM10 motor vehicle emissions budgets (Table 3-4) incorporated emissions of PM10, NOx and VOC. As described earlier in this chapter,

the mobile source portion of the 2003 AQMP emissions inventory was based on EMFAC2002. Road construction emissions were based on SCAG's 2001 Regional Transportation Plan (RTP). The proposed maintenance plan seeks to update the Basin motor vehicle emissions budgets using the 2007 AQMP's most current update of the Basin attainment emissions inventory based on EMFAC2007 and SCAG's Interim 2007 RTP assumptions.

TABLE 3-4

2003 AQMP PM10 Basin Transportation Conformity Emissions Budget for 2003, 2006 and Post Attainment Years (Annual Average Emissions in TPD)

Year	PM10	NOx	VOC
2003	168	635	311
2006, and Post Attainment Years	166	549	251

U.S. EPA's transportation conformity rule, found in 40 CFR parts 51 and 93, details the requirements for establishing motor vehicle emissions budgets in SIPs for the purpose of ensuring the conformity of transportation plans and programs with the SIP attainment demonstration. The on-road motor vehicle emissions budgets act as a "ceiling" for future on-road mobile source emissions. Exceedances of the budget indicate an inconsistency with the SIP, and could jeopardize the flow of federal funds for transportation improvements in the region. As required by the CAA, a comparison of regional on-road mobile source emissions to these budgets will occur during the periodic updates of regional transportation plans and programs. The proposed maintenance plan substitutes EMFAC2007 on-road motor vehicle emissions estimates for the previous emissions factor model and SCAG's Interim 2007 RTP assumptions (to reflect the most current motor vehicle activity data). It is important to note that as presented in Table 3-2, entrained paved road dust emissions are projected to increase from 2010 through 2030.

The 2003 AQMP was required to address both the 24-hour and now revoked annual average NAAQS. As such, the attainment demonstration was required to satisfy both standards by 2006. In the Basin, the federal annual average standard of 50 $\mu\text{g}/\text{m}^3$ was the more difficult of the two PM10 standards to meet and therefore controlled the attainment demonstration. The PM10 attainment demonstration based on the 2003 AQMP emissions resulted in maximum simulated levels of 47.6 $\mu\text{g}/\text{m}^3$ and 150 $\mu\text{g}/\text{m}^3$ for the annual and 24-hour average standards, respectively. Based on this analysis, (as listed in Table 3-4), the 2006 PM10 transportation conformity budget was approved at 166 TPD PM10 emissions.

The revised attainment demonstration based on the 2007 AQMP baseline inventory, presented in Section 3.1.1 and Appendix A-4 of this document, projected that Basin maximum 24-hour average PM10 concentrations for 2010 ($126 \mu\text{g}/\text{m}^3$) would be approximately 16 percent below the federal standard. The peak concentration predicted for 2023 and 2030 again occurs in San Bernardino at concentrations of 128 and 136 $\mu\text{g}/\text{m}^3$ respectively. The respective predicted PM10 concentrations would be 85 and 91 percent of the standard.

Attainment Modeling Sensitivity Analysis

A PM10 modeling sensitivity analysis was conducted for the years from 2010 through 2030 to test the assumption that controlled directly emitted annual day PM10 emissions from motor vehicles could be conservatively raised by up to 20 TPD without causing a violation of the 24-hour average PM10 standard in the Basin. The analysis is discussed in Appendix A-4 of this document and the results of the modeling are summarized in Table 3-5.

With the additional 20 TPD PM10 emissions added to the baseline inventory, all counties continue meet the federal PM10 standard of $150 \mu\text{g}/\text{m}^3$ in all years. Nominal PM10 concentration increases of $3\text{-}5 \mu\text{g}/\text{m}^3$ are projected with the additional emissions however the spatial pattern remains unchanged with the maximum predicted impact occurring in San Bernardino County. The 2010 through 2012 predicted highest maximum concentrations in the Basin occur in San Bernardino County ($131 \mu\text{g}/\text{m}^3$). The concentration is projected to be 87 percent of the federal standard. The peak concentration predicted for 2023 and 2030 again occurs in San Bernardino at $133 \mu\text{g}/\text{m}^3$ in 2023 and $141 \mu\text{g}/\text{m}^3$ in 2030. The predicted PM10 concentration would be 89 percent of the standard in 2023 and 94 percent of the standard in 2030. The results of the sensitivity analyses demonstrates that 20 TPD additional PM10 emissions inventory in can be added as a “modeling margin” to the baseline inventory without causing concentrations to exceed $150 \mu\text{g}/\text{m}^3$ during the period 2010 through 2030.

Transportation Conformity Emissions Budget

At the request of CARB, the proposed transportation conformity emissions budget has been withdrawn from this plan. CARB will provide the transportation conformity emissions budget as a component of their notice of public hearings, 30 days prior to CARB Public Hearing (tentatively scheduled for the first quarter 2010). The revised transportations emissions will reflect the EMFAC2007 annual average day baseline mobile source emissions with the addition of the 20 TPD PM10 modeling margin.

TABLE 3-5

Summary of Predicted 24-Hour Average PM10 Concentrations Assuming an 20 TPD Increase in Baseline Basin PM10 Emissions

Year/ Emissions Scenario	Predicted County 24-hr Maximum Concentration ($\mu\text{g}/\text{m}^3$)			
	Los Angeles	Orange	Riverside	San Bernardino
2010	105	81	124	131
2011	105	82	123	131
2012	105	81	122	130
2014	105	82	121	131
2020	106	83	121	132
2023	107	84	123	133
2030	113	89	129	141

3.2 Future Monitoring Network

U.S. EPA guidance states that once an area has been redesignated, the State should continue to operate an appropriate air quality monitoring network in accordance with 40 CFR Part 58, to verify the attainment status of the area. More specifically, daily PM10 sampling is required in the area reporting the peak PM10 concentration. The District has been submitting its continuously monitored hourly TEOM and BAM data to US EPA's AirNow data base since 2004. The preliminary 2007 non-certified TEOM and BAM 24-hour average concentrations from at each of the District stations measuring continuous PM10 are provided in Appendix 3.

As discussed in Section 2.2.1, the District presently operates FRM samplers at nineteen air quality monitoring stations in accordance with 40 CFR, part 58. The network monitors operate on a one-in-six day cycle with the exception of the Rubidoux FRM monitor which operates on an enhanced one-in-three day sampling schedule. In accordance with the requirements outlined in U.S. EPA guidance, the District will conduct a more rigorous quality assurance review of the 2007 TEOM and BAM data and submit that data with more current updates (e.g. 2008) to AQS, thus designating the

monitors as FEM. Furthermore, the District will begin phase-in upgraded TEOM PM10 monitors at each site as FEM samplers to fulfill the daily monitoring requirements specified in U.S. EPA guidance.

The District will assure the on-going quality of the measured data by performing the operational procedures for data collection including routine calibrations, pre-run and post-run test procedures, and routine service checks. An annual review of the District's entire air quality monitoring network is required by federal regulations as a means to determine if the network is effectively meeting the objectives of the monitoring program. If relocation or a closure is recommended in the annual network review, reports are submitted to the U.S. EPA and the ARB to document compliance with siting criteria. The data collection procedures already in place, in conjunction with the annual review program, will ensure that future PM10 ambient concentrations are monitored throughout the Basin.

The District is committed to continue operating the FRM and the continuous TEOM and BAM PM10 network in the Basin to verify the attainment status of the area.

3.3 Verification of Continued Attainment

U.S. EPA guidance requires the District to periodically review the assumptions and data for the attainment inventory and demonstration. This guidance further suggests that the reevaluation take place every three years and include a complete review of the modeling assumptions and input data. The purpose of the reevaluation is to determine the effectiveness of the control strategy. The District will conduct a reevaluation of the Basin PM10 Maintenance Plan as part of the AQMP process. In accordance with U.S. EPA guidance, a revision to the PM10 Maintenance Plan for the subsequent ten year maintenance planning period will be submitted to U.S. EPA prior to the horizon date (to be determined upon U.S. EPA approval of the maintenance plan).

In addition to the verification actions listed above, the District will analyze the PM10 air quality data collected on a daily basis using the TEOMs and BAM and on a one-in-three (Rubidoux) or one-in-six (other Basin stations) sampling schedule using the FRM analyzers. Specifically, daily PM10 24-hour average concentrations will be compared directly with the 24-hour PM10 NAAQS.

3.4 Contingency Plan

CAA Section 175A(d) requires maintenance plans to identify contingency provisions to offset any unexpected increases in emissions and ensure maintenance of the standard.

3.4.1 Emissions Reductions

Contingency provisions are traditionally held in reserve and implemented only if an area violates the standard. Implementation of District Rules 403 and 1186, in particular, have been effective measures to abate fugitive dust emissions from anthropogenic source activities such as construction and farming. Concentrations of 24-hour average PM10 exceed the NAAQS in the Basin only under selected exceptional conditions such as the October 21, 2007 wildfires, the April 12, 2007 “Santa Ana” high winds event where localized wind gusts 40 mph and sustained hourly winds exceeded 30 mph, and finally, July 5, 2007 following Fourth of July fireworks demonstrations. During the period 2005-2007, excluding documented exceptional events, PM10 24-hour average concentrations have exceeded 125 $\mu\text{g}/\text{m}^3$ on only six days. When all daily FRM PM10 data are evaluated (including severe dust, fire and fireworks events) from January 1990 through June of 2008, the 99.5th percentile Basin PM10 concentration was 140 $\mu\text{g}/\text{m}^3$, 93 percent of the NAAQS. Furthermore, the 97.5th percentile PM10 concentration was 101 $\mu\text{g}/\text{m}^3$, only 67 percent of the NAAQS. Barring an exceptional event, which will be flagged, the PM10 24-hour average NAAQS is not likely to be violated in the Basin.

Emissions reductions from the implementation of the 2007 AQMP revision including measures from CARB to attain the annual PM2.5 standard are estimated to reduce the Basin maximum PM10 24-hour average concentrations by 14 percent in 2015 and an additional 6 percent by 2020. Implementation of the AQMP serves as an “ongoing contingency measure” since emissions reductions designed to attain the PM2.5 and ozone standards will effectively reduce ambient PM10.

Existing District BARCT rules will continue to control local PM10 emissions despite growth in the Basin. While 24-hour averaged PM10 concentrations are not expected to exceed the standard, the District will commit to

- (1) annual reviews of the effectiveness of Rules 403, 1157, 1158 and 1186;
- (2) establish a trigger to implement a contingency action; whereby;
- (3) if the 24-hour average PM10 standard is violated in the Basin, excluding exceptional events; then,
- (4) the District will evaluate amending BARCT Rules 403, 444, 1157, 1158 and 1186 to further strengthen prohibitions on particulate emissions.

3.4.2 Implementing Agency

The CARB has the authority to set vehicle emissions standards and fuel formulation requirements for California.

The District has the authority and is the agency responsible for developing and enforcing air pollution control BARCT rules in the Basin for stationary and areawide sources.

3.5 Contingency Plan Implementation

The District is committed to a formal review of the Basin PM10 Maintenance Plan as a component of its next AQMP revision. Subsequent plan revisions to address the latest updates to the federal ozone standard and meet the California tri-annual reporting will serve as opportunities to conduct reviews of the Basin PM10 Maintenance Plan. Also, the District will review ambient PM10 daily monitoring data to assess continued maintenance of the 24-hour standard. If either of these mechanisms indicates that additional emissions reductions are needed or the adopted rules are not achieving the committed reductions, the District will ensure that enhancements to existing BARCT rules or additional measures are developed and adopted to achieve the necessary reductions as expeditiously as possible.

The District also commits to submit a second maintenance plan 8 years after redesignation to show maintenance for at least the next 10 year period.

3.6 Authority

The CARB has the authority to set vehicle emissions standards and fuel formulation for California.

The District has the authority and is the agency responsible for developing and enforcing air pollution control BARCT rules in the Basin for stationary and areawide sources.

4.0 SUMMARY CHECKLIST

Table 4-1 summarizes the status of the elements that need to be satisfied in order to meet CAA requirements as well as conform to the guidance documents prepared by the U.S. EPA (e.g., request for redesignation and maintenance plan).

TABLE 4-1

Summary Checklist of Document References

Plan Components	CAA/U.S. EPA Requirements	Status	Document Reference
Redesignation Request	Attainment with NAAQS	Conditions met	Section 2.1.2
	U.S. EPA approval of State Implementation Plan*	Conditions met	Section 2.2
	Air quality improvements due to permanent and enforceable emissions reductions	Conditions met	Section 2.3
	Section 110 and Part D requirements have been met	Conditions met	Section 2.4
	U.S. EPA approval of a maintenance plan and contingency plan	Pending (as part of this submittal)	Section 3
Maintenance Plan	Attainment inventory	Conditions met	Section 3.1.1
	Maintenance demonstration	Conditions met	Sections 3.1.1, and 3.1.2
	Monitoring network	Commitment established	Sections 2.3 and 3.2
	Verification of continued attainment	Commitment established	Section 3.3
	Contingency Plan	Commitment established	Sections 3.4, 3.5 and 3.6

References

SCAQMD, 2003, “Final 2003 Air Quality Management Plan”.

SCAQMD, 2007, “Final 2007 Air Quality Management Plan.”

ATTACHMENT - 1

Air Quality Data Certification Letters to U.S. EPA



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

December 7, 2006

Mr. Sean Hogan, Chief
Technical Support Office
Air Division
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Mr. Hogan:

The South Coast Air Quality Management District (SCAQMD) is responsible for submitting National Air Monitoring Station (NAMS) and State and Local Air Monitoring Station (SLAMS) air quality data to the Air Quality System (AQS) for those AQS monitors under the control of the SCAQMD. In accordance with 40 CFR Part 58, this letter certifies that the 2005 data for these monitors are complete and accurate to the best of my knowledge. This letter of certification fulfills the certification objectives of the Section 105 Grant for Fiscal Year 2006.

The resultant wind speed and resultant wind direction data, which are calculated from wind speed and direction measurements, has not been submitted as there was a program failure which corrupted the calculation routine. SCAQMD staff has retrieved the backup data and is in the process of recalculating the vector values. This data, which makes up less than three percent of the total data submitted, will be reviewed and submitted within the next two months.

If you have any questions regarding this letter, please feel free to contact me at (909) 396-2105, or Dr. Philip Fine, Atmospheric Measurements Manager-Science and Technology Advancement, at (909) 396-2239.

Sincerely,

Chung S. Liu
Deputy Executive Officer
Science & Technology Advancement

CSL:HH:PF:AR:SC:cv

cc: M. Leonard



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

July 26, 2007

Mr. Sean Hogan, Chief
Technical Support Office
Air Division
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Mr. Hogan:

The South Coast Air Quality Management District (SCAQMD) is responsible for submitting National Air Monitoring Station (NAMS) and State and Local Air Monitoring Station (SLAMS) air quality data to the Air Quality System (AQS) for those AQS monitors under the control of the SCAQMD. In accordance with 40 CFR Part 58, this letter certifies that the 2006 ambient concentration data and the quality assurance data are completely submitted to AQS, and the ambient data are accurate to the best of my knowledge taking into consideration the quality assurance findings. This letter also certifies the wind speed and wind direction data for 2005, which has not been certified previously. This letter of certification fulfills the certification objectives of the Section 105 Grant for Fiscal Year 2007.

The required summary reports have been sent electronically to Norma Douglas and Catherine Brown at EPA region 9.

If you have any questions regarding this letter, please feel free to contact me at (909) 396-2105, or Dr. Philip Fine, Atmospheric Measurements Manager, Science and Technology Advancement, at (909) 396-2239.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chung S. Liu', is positioned above the printed name.

Chung S. Liu
Deputy Executive Officer
Science & Technology Advancement

CSL:HH:PF:RE:mh

cc: M. Leonard



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

June 25, 2008

Mr. Wayne Nastri, Region Administrator
U.S. EPA REGION 9
75 Hawthorne Street
San Francisco, CA 94105

Dear Mr. Nastri:

The South Coast Air Quality Management District (SCAQMD) is responsible for submitting National Air Monitoring Station (NAMS), State and Local Air Monitoring Station (SLAMS), Photochemical Assessment Monitoring Station (PAMS), and air quality data to the Air Quality System (AQS) for those AQS monitors under the control of SCAQMD. In accordance with 40 CFR Part 58, this letter certifies that the 2007 ambient concentration data and the quality assurance data, with exception to PM10 and PAMS Burbank continuous GC VOC data, are completely submitted to AQS. The ambient data are accurate to the best of my knowledge, taking into consideration the quality assurance findings. This letter of certification fulfills the certification objectives of the Section 105 Grant for Fiscal Year 2008.

The required summary reports have been sent electronically to Sean Hogan at U.S. EPA Region 9.

If you have any questions regarding this letter, please feel free to contact me at (909) 396-2105, or Dr. Jason Low, Quality Assurance Manager, Science and Technology Advancement, at (909) 396-2269.

Sincerely,

Chung S. Liu
Deputy Executive Officer
Science and Technology Advancement

CSL: JL

cc: M. Leonard
R. Eden
P. Fine



South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

June 26, 2009

Ms. Laura Yoshii, Region Administrator
U.S. EPA REGION 9
75 Hawthorne Street
San Francisco, CA 94105

Dear Ms. Yoshii:

The South Coast Air Quality Management District (SCAQMD) is responsible for submitting National Air Monitoring Station (NAMS), State and Local Air Monitoring Station (SLAMS), Photochemical Assessment Monitoring Station (PAMS), National Air Toxics Trends Stations (NATTS) and air quality data to the Air Quality System (AQS) for those AQS monitors under the control of SCAQMD. In accordance with 40 CFR Part 58, this letter certifies that the 2008 ambient concentration data and the quality assurance data are completely submitted to AQS, with the following exceptions:

- PM10 FRM
- TSP
- NATTS (PM Metals and VOC)
- 4th Quarter PM_{2.5}
- Continuous PM
- Ozone, NO₂, CO and SO₂ for Mira Loma (Site ID: 06-065-8005)

AQMD is conducting the final stages of review for most of the above data and anticipates its certification readiness soon.

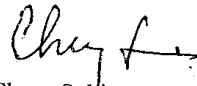
This letter certifies data not certified last year which includes the 2007 PAMS Burbank continuous GC VOC, the NATTS carbonyl and VOC data, and PM10 2007 data.

The ambient data are accurate to the best of my knowledge, taking into consideration the quality assurance findings. This letter of certification fulfills the certification objectives of the Section 105 Grant for Fiscal Year 2009.

The required summary reports have been sent electronically to Matthew Lakin at U.S. EPA Region 9.

If you have any questions regarding this letter, please feel free to contact me at (909) 396-2105, or Dr. Jason Low, Quality Assurance Manager, Science and Technology Advancement, at (909) 396-2269.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chung S. Liu', with a stylized flourish at the end.

Chung S. Liu
Deputy Executive Officer
Science and Technology Advancement

CSL: JL

cc: M. Leonard
R. Eden
P. Fine

ATTACHMENT - 2

Time Series of Preliminary Continuous Monitored PM10 24-Hour Average Concentrations (2005-2007)

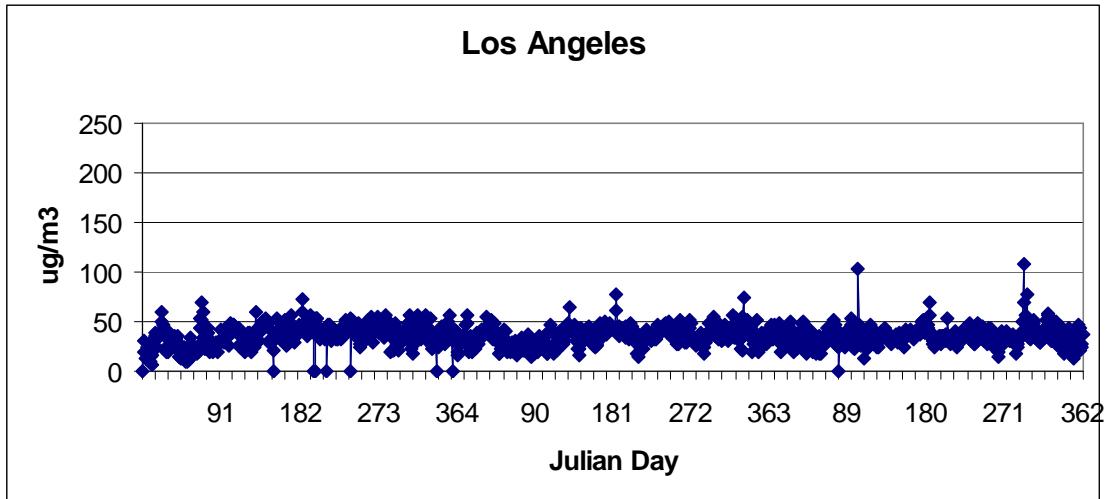


Figure A-3-1

District 24-Hour Average Los Angeles BAM Continuous PM10 (2005-2007)

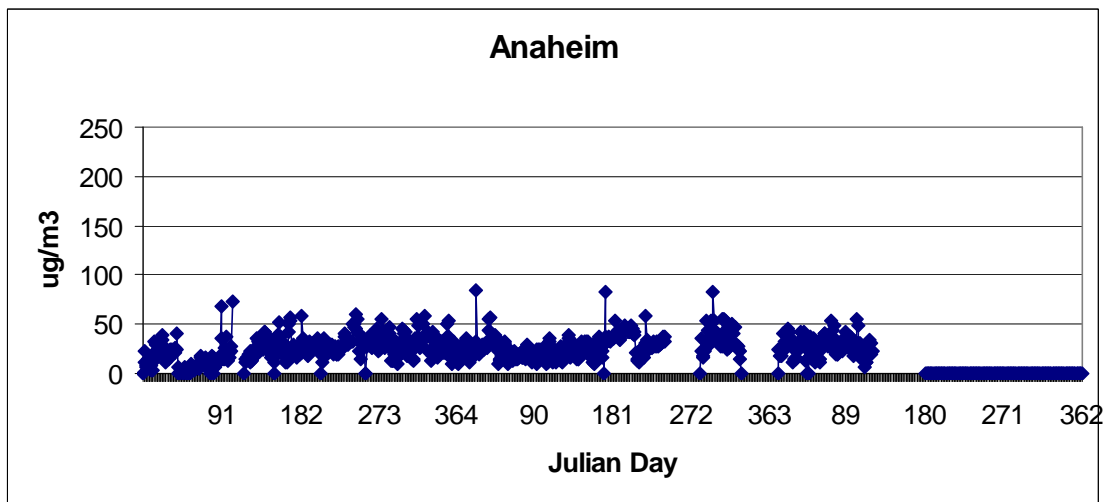


Figure A-3-2

District 24-Hour Average Anaheim TEOM Continuous PM10 (2005-2007)

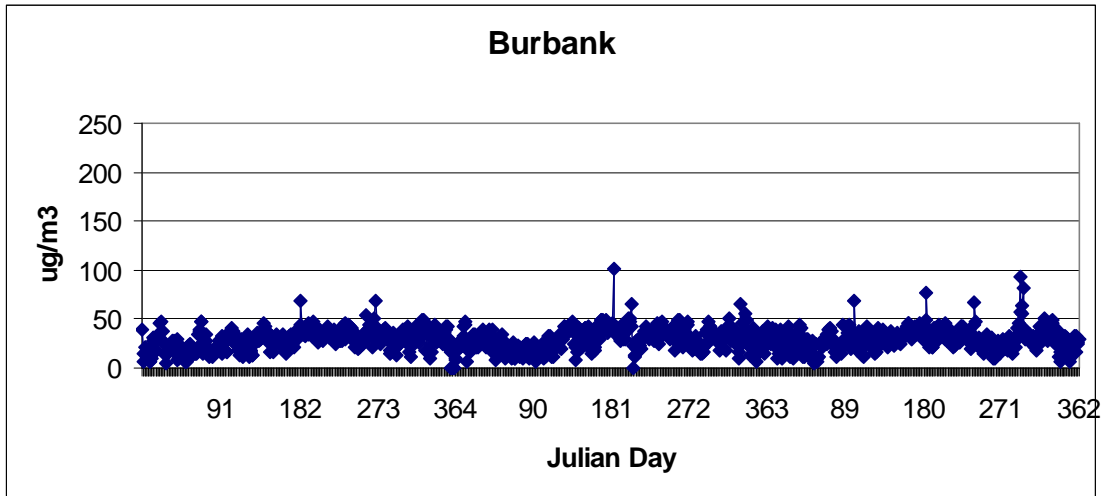


Figure A-3-3

District 24-Hour Average Burbank TEOM Continuous PM10 (2005-2007)

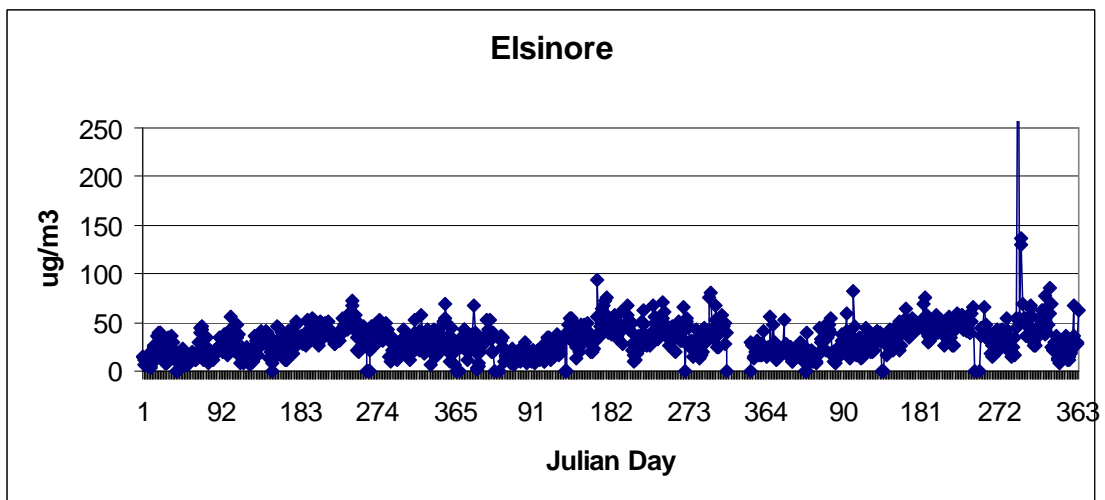


Figure A-3-4

District 24-Hour Average Elsinore TEOM Continuous PM10 (2005-2007)

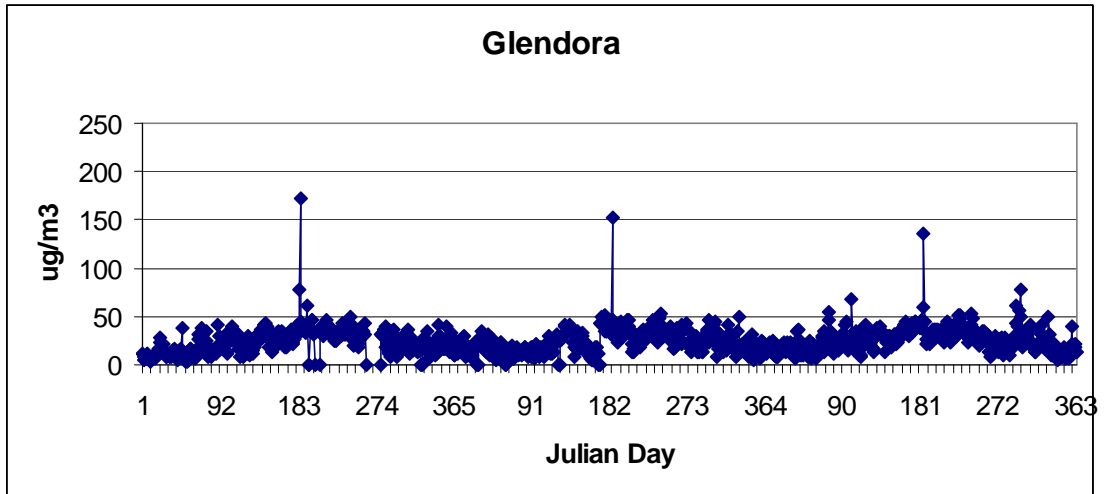


Figure A-3-5

District 24-Hour Average Glendora TEOM Continuous PM₁₀ (2005-2007)

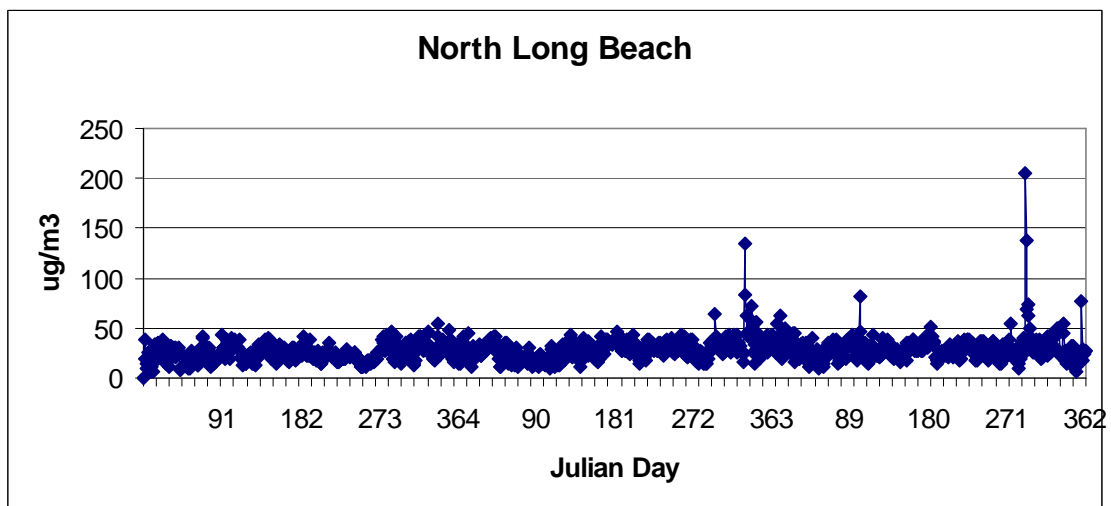


Figure A-3-6

District 24-Hour Average North Long Beach TEOM Continuous PM₁₀ (2005-2007)

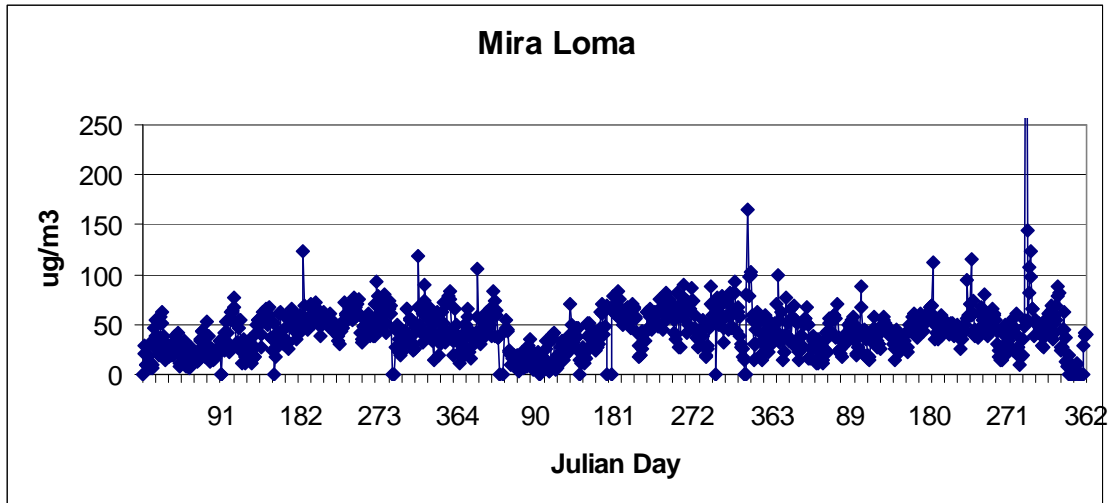


Figure A-3-7

District 24-Hour Average Mira Loma TEOM Continuous PM10 (2005-2007)

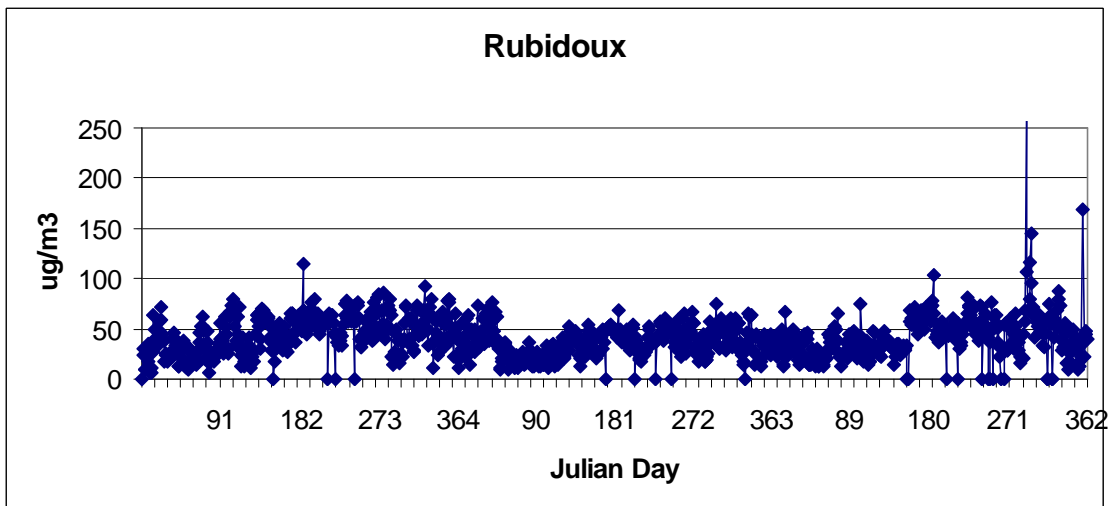


Figure A-3-8

District 24-Hour Average Rubidoux TEOM Continuous PM10 (2005-2007)

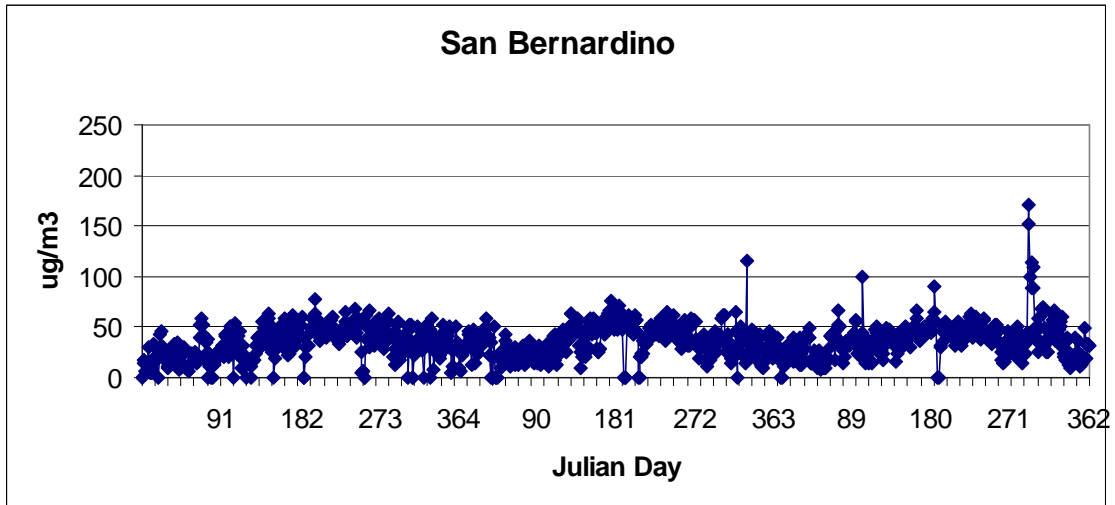


Figure A-3-9

District 24-Hour Average San Bernardino TEOM Continuous PM10 (2005-2007)

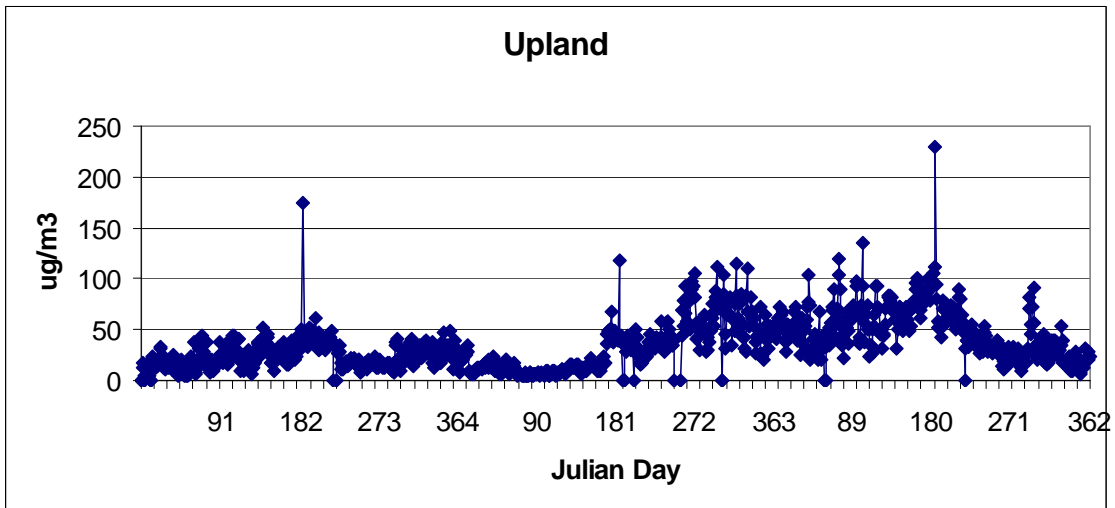


Figure A-3-10

District 24-Hour Average Upland TEOM Continuous PM10 (2005-2007)

ATTACHMENT - 3

Preliminary 2007 Continuous PM10 Monitoring Data

Table A-3-1

Preliminary* 2007 Downtown Los Angeles BAM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	47	28	28	42	30	36	38	37	40	34	42	26
2	39	38	31	43	29	37	43	32	43	41	49	26
3	39	36	28	37	30	31	46	41	44	39	51	30
4	32	32	28	46	33	35	57	34	45	34	34	41
5	34	36	28	54	25	25	69	24	39	31	38	45
6	46	49	37	34	25	34	39	26	31	33	38	32
7	38	49	39	25	33	42	38	31	30	31	42	22
8	43	50	44	23	30	39	28	34	30	32	36	23
9	39	47	34	30	36	37	30	35	27	37	30	18
10	49	43	43	36	40	37	28	35	32	31	29	25
11	32	18	43	40	39	38	25	35	40	32	29	27
12	20	26	39	104	37	42	28	32	44	33	33	26
13	27	22	43	46	38	40	31	37	39	17	38	30
14	32	31	34	36	43	38	34	43	44	29	37	44
15	44	36	52	26	40	36	29	42	37	28	34	40
16	44	40	44	39	41	33	35	44	33	24	44	30
17	35	34	46	41	37	35	36	43	27	33	52	37
18	39	28	27	26	35	41	27	45	39	39	52	20
19	39	20	26	28	35	37	31	40	31	38	57	13
20	26	28	25	13	34	37	36	45	23	36	58	18
21	33	36		24	28	38	35	49	29	50	53	23
22	38	17	32	24	32	44	36	33	14	108	43	30
23	40	20	35	23	30	37	37	31	19	69	31	26
24	50	27	29	31	33	42	31	33	28	50	40	24
25	42	30	30	40	32	43	37	27	37	56	31	46
26	40	36	29	35	37	50	53	28	35	77	44	44
27	20	18	37	47	35	50	34	31	40	49	46	21
28	23	18	24	43	29	51	32	30	27	34	50	27
29	34		35	33	31	43	28	40	28	42	44	25
30	24		41	39	33	38	30	48	36	32	36	37
31	22		39		38		33	46		39		37
Max	50	50	52	104	43	51	69	49	45	108	58	46
Days/Mth	31	28	30	30	31	30	31	31	30	31	30	31
Days/Qtr			89			91			92			92

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

Table A-3-2

Preliminary* 2007 Anaheim TEOM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1		23	24	33								
2		29	30	26								
3		29	38	29								
4		31	33	37								
5		42	40	36								
6		30	40	29								
7		35	35	23								
8		35	28	18								
9		42	31	22								
10		26	37	32								
11	24	13	38	30								
12	18	14	54	56								
13	22		38	48								
14	18		24	22								
15	40	35	44	22								
16	27	37	48	31								
17	28	34	36	28								
18	32	21	20	15								
19	28	15	21	20								
20	26	25	20	7								
21	30	35	19	14								
22	46	11	31	12								
23	36	13	28	11								
24	42	21	26	23								
25	28	25	34	24								
26	34	29	23	24								
27	12	14	32	34								
28	15	12	31	31								
29	25		35	20								
30	14		42	22								
31	16		37									
Max	46	42	54	56								
Days/Mth	21	26	31	30	0	0	0	0	0	0	0	0
Days/Qtr			78			30			0			0

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

Table A-3-3

Preliminary* 2007 Burbank TEOM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	30	20	11	31	29	36	30	39	31	24	33	26
2	29	27	24	42	21	30	42	35	30	29	35	25
3	39	25	25	36	20	26	44	33	31	24	27	30
4	24	18	22	43	28	28	49	32	28	28	25	40
5	33	28	21	44	16	25	76	21	30	20	29	36
6	41	44	24	34	14	29	38	24	23	19	27	29
7	29	40	30	24	17	36	26	23	20	18	32	11
8	31	33	28	20	20	34	22	28	18	21	28	16
9	34	41	31	24	41	34	27	31	15	30	21	7
10	40	22	35	33	24	37	31	32	23	33	18	21
11	21	11	24	36	36	37	22	31	26	28	25	32
12	9	16	28	69	31	42	22	26	31	28	23	13
13	14	11	40	29	31	45	34	30	33	15	36	29
14	18	15	30	27	39	46	41	42	35	19	43	32
15	36	29	41	18	38	43	31	42	27	26	33	31
16	39	29	38	35	32	33	41	40	24	22	41	25
17	33	17	31	37	28	30	39	43	25	28	37	26
18	10	21	25	16	25	39	28	36	31	41	33	11
19	29	12	22	21	25	37	31	37	23	35	44	7
20	25	22	16	13	26	39	44	33	10	45	50	10
21	20	27	12	15	22	39	39	36	20	34	42	17
22	37	8	20	13	29	42	35	38	10	93	30	28
23	34	5	22	12	29	35	35	29	14	58	28	26
24	42	13	21	23	30	38	38	32	20	56	36	17
25	30	25	24	27	37	43	38	24	23	64	35	32
26	36	25	25	36	34	46	45	19	27	81	44	33
27	11	9	20	43	30	40	30	24	26	41	47	16
28	14	7	15	40	23	41	32	28	20	29	49	26
29	27		23	32	28	40	27	44	15	34	45	24
30	15		44	35	29	36	33	67	22	32	34	29
31	10		29		30		34	48		34		25
Max	42	44	44	69	41	46	76	67	35	93	50	40
Days/Mth	31	28	31	30	31	30	31	31	30	31	30	31
Days/Qtr			90			91			92			92

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

Table A-3-4

Preliminary* 2007 Lake Elsinore TEOM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	15	14	16	29	26	46	44	56		39	55	23
2	21	21	17	32	21	40	69	54		35	52	21
3	25	21	44	32	19	34	55	43		42	37	29
4	22	16	20	60	19	51	56	34		41	45	29
5	56	23	29	41	22	22	76	28		26	67	36
6	19	23	33	23	22	26	57	27		25	64	30
7	22	23	32	15	39	40	42	27		26	56	12
8	47	22	31	13	30	47	29	44	45	43	41	13
9	25	29	46	22	37	42	36	43	36	54	30	9
10	29	25	40	32	41	40	34	47	43	36	27	16
11	16	11	22	35	40	41	31	51	44	31	27	17
12	12	11	34	83	32	55	36	60	65	20	38	23
13	13	16	40	46	32	64	48	57	48	14	40	29
14	14	20	42	28	40	49	51	52	47	20	40	33
15	20		48	16		46	36	54	41	25	46	22
16	19		55	29		42	39	58	34	18	48	27
17	23	40	39	32		34	49	58	32	16	38	36
18	19	22	19	25		42	58	43	40	35	51	23
19	23	10	17	34	33	50	39	43	29	54	63	12
20	21	16	15	13	31	54	42	55	18	45	63	12
21	52	22	10	16	17	44	50	48	27	382	59	14
22	19	10	9	14	25	47	44	48	14	579	38	18
23	28	10	13	15	40	51	52	41	16	55	78	20
24	26	14	16	25	39	41	43	57	29	51	39	24
25	24	18	24	27	43	49	38	53	33	136	48	67
26	25	14	14	31	35	48	43	40	36	130	60	37
27	15	9	20	44	29	48	38	39	43	69	59	26
28	15	10	26	40	22	44	27	51	21	55	86	30
29	24		38	30	26	50	34	60	25	54	69	30
30	10		31	35	39	50	47	66	28	37	24	28
31	10		27		35		47			49		63
Max	56	40	55	83	43	64	76	66	65	579	86	67
Days/Mth	31	26	31	30	27	30	31	30	23	31	30	31
Days/Qtr			88			87			84			92

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

Table A-3-5

Preliminary* 2007 Glendora TEOM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	16	22	11	27	30	31	38	45	37	27	35	19
2	12	21	12	33	23	27	41	36	37	27	34	10
3	17	17	14	32	24	21	46	38	32	27	29	10
4	18	7	13	42	22	26	59	31	32	27	26	10
5	17	20	18	44	18	24	135	24	34	28	35	20
6	24	24	17	30	17	27	44	25	27	15	33	21
7	18	34	23	17	13	34	35	26	27	10	41	12
8	17	27	28	15	17	35	22	33	28	20	35	10
9	20	36	30	19	30	36	27	37	20	28	21	5
10	25	25	34	28	28	35	23	39	25	20	17	8
11	21	10	13	32	31	36	23	36	28	22	21	9
12	10	10	18	68	38	41	22	30	34	21	13	9
13	8	10	25	28	35	45	27	32	34	10	13	12
14	9	15	31	22	40	43	33	51	32	15	17	15
15	18	20	46	15	37	34	27	47	29	20	22	9
16	15	12	54	29	34	35	36	52	29	18	36	11
17	13	12	34	34	32	29	36	48	27	18	34	19
18	15	13	23	15	29	32	33	37	32	18	33	9
19	19	9	18	20	30	39	28	37	21	20	33	6
20	18	17	15	10	26	39	36	33	14	29	41	8
21	22	25	12	11	13	33	36	39	15	43	31	11
22	24	10	17	10	23	43	35	39	8	61	27	9
23	17	6	24	8	27	36	32	33	10	39	20	6
24	17	11	24	18	28	37	32	38	18	28	17	10
25	14	18	26	22	30	44	36	29	25	57	16	40
26	23	21	22	32	29	44	35	23	22	78	21	22
27	16	10	15	40	26	41	31	27	30	50	29	15
28	14	6	18	41	18	41	23	27	22	18	50	15
29	24		23	33	22	40	27	41	19	35	31	21
30	15		23	33	26	40	33	53	14	26	14	19
31	12		23		31		36	48		32		14
Max	25	36	54	68	40	45	135	53	37	78	50	40
Days/Mth	31	28	31	30	31	30	31	31	30	31	30	31
Days/Qtr			90			91			92			92

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

Table A-3-6

Preliminary* 2007 Long Beach TEOM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	44	29	15	37	23	29	32	34	33	27	35	22
2	33	34	24	32	23	24	37	30	35	32	39	23
3	35	33	28	35	26	23	36	37	37	38	35	22
4	26	23	21	43	27	31	52	22	34	24	24	54
5	36	36	28	42	21	18	42	17	26	55	26	45
6	55	31	35	28	23	36	37	19	22	28	27	27
7	41	30	30	23	25	36	35	20	21	23	38	18
8	40	36	29	18	40	34	21	24	19	25	24	21
9	39	28	30	23	38	31	21	28	17	29	20	14
10	63	18	34	33	33	32	18	32	23	17	21	21
11	40	12	35	36	31	31	15	39	29	23	24	18
12	20	15	39	82	37	38	18	32	31	21	25	23
13	27	17	28	46	35	39	27	37	37	10	29	31
14	33	28	24	25	39	30	25	38	37	15	37	32
15	49	28	39	30	36	27	24	38	33	19	42	32
16	42	40	37	35	36	29	25	39	24	19	23	24
17	29	25	31	33	24	28	27	34	24	22	25	24
18	37	23	15	36	23	27	22	35	30	37	33	9
19	35	14	17	30	24	30	22	35	29	40	43	7
20	26	22	16	16	21	36	26	36	18	32	25	11
21	33	29	18	17	20	31	26	28	18	205	29	21
22	42	15	29	14	28	27	25	24	14	138	31	24
23	40	10	22	17	27	28	26	27	15	69	31	19
24	45	18	23	28	27	33	21	29	22	63	30	20
25	38	25	28	33	29	33	31	18	34	74	31	77
26	45	28	20	30	26	38	34	17	33	50	41	29
27	16	13	37	43	21	42	31	21	28	41	49	18
28	19	11	34	31	16	34	24	24	24	32	49	25
29	29		39	24	20	33	21	35	21	34	49	24
30	19		37	23	27	31	22	37	26	25	24	27
31	20		35		27		25	37		36		26
Max	63	40	39	82	40	42	52	39	37	205	49	77
Days/Mth	31	28	31	30	31	30	31	31	30	31	30	31
Days/Qtr			90			91			92			92

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

Table A-3-7

Preliminary* 2007 Mira Loma TEOM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	35	24	26	54	34	40	57	48	55	49	55	24
2	43	38	33	51	28	33	67	48	80	47	53	27
3	51	39	41	43	31	28	69	50	50	51	50	45
4	35	29	23	58	30	42	69	40	51	46	52	63
5	70	49	44	50	26	23	112	25	50	40	41	45
6	41	56	56	33	41	27	59	35	39	24	43	37
7	99	56	51	19	49	44	50	36	47	56	44	13
8	32	51	44	21	54	49	35	44	45	47	39	14
9	55	68	40	27	58	44	41	49	41	61	29	8
10	62	50	55	39	51	46	38	43	45	40	27	19
11	38	16	56	42	48	45	35	44	59	27	37	
12	14	16	60	88	48	58	46	49	65	27	47	
13	22	18	60	67	48	61	56	56	59	9	54	
14	23	25	37	44	47	52	59	95	61	18	51	
15	77	37	56	21	43	49	38	57	55	18	54	
16	40	38	70	37	39	45	52	60	47	20	61	
17	52	33	37	45	42	37	56	70	30	19	43	
18	37	28	24	35	40	42	50	116	43	36	47	
19	33	12	21	43	38	53	47	60	24	55	64	9
20	34	28	26	16	31	60	47	74	18	48	69	12
21	65	35	17	19	15	61	45	61	28	581	49	
22	36	12	35	18	25	55	45	45	14	145	36	
23	57	16	38	15	38	48	43	38	14	55	60	
24	69	24	32	33	45	44	40	44	28	82	42	
25	55	26	40	37	42	54	44	41	40	108	54	
26	55	24	30	37	36	56	51	37	47	123	69	
27	28	12	35	57	30	55	51	39	49	97	78	29
28	31	15	40	47	22	60	50	46	21	65	88	38
29	52		50	33	30	63	39	61	26	65	81	42
30	22		51	35	35	61	45	68	33	39	28	40
31	15		47		38		41	62		53		49
Max	99	68	70	88	58	63	112	116	80	581	88	63
Days/Mth	31	28	31	30	31	30	31	31	30	31	30	17
Days/Qtr			90			91			92			78

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

Table A-3-8

Preliminary* 2007 Rubidoux TEOM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	41	21	21	42	33	33	57	52	60	51	62	28
2	31	33	19	46	27	30	71		65	55	57	32
3	43	37	21	32	24	28	73	55	47	61	52	48
4	34	26	25	48	24	34	78	44	50	56	63	44
5	22	40	30	42	23		104	31	52	36	46	56
6	27	45	44	29	31		66	34	41	30	48	49
7	40	44	41	20	39	57	56	36		44	58	16
8	34	43	37	22	42	69	42	45		52	46	16
9	45	46	32	24	47	54	48	53	36	66	34	10
10	49	40	48	30	42	60	45	51	47	44	32	17
11	31	15	35	38	40	57	36	57	76	37	44	26
12	12	14	52	75	39	67	39	55		28	46	34
13	15	15	48	42	39	72	51	65	62	16	57	39
14	22	23	29	41	38	63	58	81	63	22		50
15	67	31	49	18	35	58	40	72	63	22		35
16	41	25	65	29	32	51	52	73	55	21	75	37
17	41	21	38	36	36	45	52	64	37	21	55	42
18	24	24	26	23	34	52	47	53	51	45	63	31
19	27	12	22	38	31	63	52	59	32	58		10
20	39	21	20	15	28	65		69	22	69		12
21	30	30	12	20	15	68	49	74		275	61	13
22	43	12	23	18	22	69	45	56		107	42	17
23	47	13	26	17	33	61	43	44		68	54	22
24	49	19	27	30	35	49	46	52		79	57	33
25	35	24	36	34	35	57	48	47		116	51	168
26	39	21	26	32	33	72	53	39	54	145	69	45
27	25	12	21	47	31	68	61	48	56	96	80	22
28	25	14	29	46	24	60	44	45	29	65	87	48
29	38		38	33	28	64	40	74	28	72	73	44
30	19		44	32	31	66	43	71	34	41	38	40
31	14		44		32		44			62		45
Max	67	46	65	75	47	72	104	81	76	275	87	168
Days/Mth	31	28	31	30	31	28	30	29	22	31	26	31
Days/Qtr			90			89			81			88

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

Table A-3-9

Preliminary* 2007 San Bernardino TEOM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	29	24	16	38	37	51	45	55	42	39	58	21
2	27	36	16	44	27	40	55	50	46	40	25	18
3	32	28	21	44	24	36	58	49	38	39	37	29
4	40	17	18	57	27	47	65	41	42	43	49	24
5	18	29	30	55	18	38	90	31	44	32	68	40
6	22	38	41	40	23	30	56	37	44	30	70	38
7		43	43	23	32	42		37	41	21	64	13
8		39	39	22	38	47		40	37	39	49	14
9		49	44	29	49	44		50	33	51	32	9
10		40	41	36	42	45		50	40	44	25	18
11	29	15	18	45	41	45	30	50	45	37	35	18
12	11	14	41	99	47	52	32	45	43	32	25	22
13	14	14	47	40	40	59	46	44	53	14	36	22
14	16	19	47	33	47	67	53	60	53	22	38	40
15	18	27	52	14	41	44	37	56	45	31	41	24
16	22	17	67	29	38	41	47	64	37	22	49	20
17	33	13	51	38	39	37	56	57	33	24	52	36
18	25	20	35	22	38	48	44	39	47	34	57	25
19	24	9	30	33	35	47	42	46	26	40	61	11
20	30	21	27	14	30	44	46	51	17	44	66	13
21	27	27	15	17	16	49	47	52	28	171	37	12
22	16	11	21	16	23	46	46	60	14	152	37	19
23	39	8	31	15	42	51	46	46	16	99	44	16
24	36	13	31	30	44	42	47	49	28	114	36	21
25	34	19	37	31	45	51	43	48	36	89	33	49
26	35	20	37	39	41	50	45	38	37	109	47	34
27	23	9	35	47	36	53	44	38	46	88	51	19
28	24	10	32	50	30	48	32	43	25	44	55	32
29	40		35	44	38	51	37	50	24	49	60	33
30	13		39	44	48	48	44	57	27	36	24	31
31	13		40		44		48	58		50		26
Max	40	49	67	99	49	67	90	64	53	171	70	49
Days/Mth	27	28	31	30	31	30	27	31	30	31	30	31
Days/Qtr			86			91			88			92

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

Table A-3-10

Preliminary* 2007 Upland TEOM Continuous 24-Hour Average
PM10 Monitoring Data** ($\mu\text{g}/\text{m}^3$)
Daily Concentrations Exceeding the Federal Standard ($150 \mu\text{g}/\text{m}^3$) are in Bold Type

Day	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1	42	38	33	69	70	72	91	90	40	25	37	19
2	41	62	39	74	46	69	105	81	44	33	29	18
3	49	48	40	69	46	59	106	80	31	31	25	21
4	49	33	34	98	50	70	112	65	29	29	28	21
5	62	54	52	93	32	49	230	48	34	28	36	22
6	73	60	57	64	44	53	94	54	30	20	42	23
7	50	72	51	37	46	69	80	56	31	18	46	11
8	64	77	69	36	55	76	52		32	25	32	11
9	60	104	73	43	71	73	58	32	26	31	18	9
10	67	74	89	63	73	72	56	40	34	23	15	10
11	48	20	42	74	82	78	43	39	36	22	24	15
12	40	26	58	135	83	89	52	38	35	20	17	16
13	37	30	63	92	79	96	70	33	38	10	19	18
14	29	41	70	56	83	101	78	45	39	17	23	28
15	55	46	104	37	82	81	55	46	39	19	24	21
16	49	41	119	64	75	71	69	55	31	19	36	20
17	53	29	89	74	74	62	75	48	26	17	39	22
18	44	34	54	51	72	69	62	37	34	25	40	15
19	47	21	44	50	66	82	60	39	23	29	27	7
20	48	42	35	24	59	90	71	42	14	31	40	8
21	55	67	22	35	32	78	72	37	19	70	38	14
22	68	22	37	34	51	85	70	41	11	82	30	17
23	53	21	58	26	66	83	74	32	12	55	29	13
24	72	30	52	50	72	77	70	39	21	45	23	17
25	52	42	67	54	73	86	72	34	28	73	23	32
26	53	44	48	65	69	99	71	26	30	91	30	22
27	40		36	93	62	89	71	29	33	57	35	20
28	42		58	93	48	90	53	29	20	23	53	21
29	63		59	72	55	79	51	38	19	35	39	28
30	40		68	70	64	94	64	53	17	21	18	24
31	25		67		69		69	47		32		23
Max	73	104	119	135	83	101	230	90	44	91	53	32
Days/Mth	31	26	31	30	31	30	31	30	30	31	30	31
Days/Qtr			88			91			91			92

* Data is preliminary and has not been certified or submitted to AQS

** Day required 18 hours of valid data

ATTACHMENT - 4

PM10 Attainment Demonstration

INTRODUCTION

The analysis provided in this attachment updates the Basin PM10 attainment demonstration presented in the 2007 AQMP. The modeling methodology used to estimate future year PM10 is essentially the same as that listed in the 2007 AQMP, Appendix V, Chapter 2 with three modifications. First, the modeling is conducted to estimate the more conservative annual maximum concentration as opposed to the annual second maximum concentration predicted for the attainment demonstration. Second, in the 2007 PM10 attainment demonstration, growth in the directly emitted coarse fraction of PM10 was treated as a constant from the 2005 base-year through 2015. This reflected the minimal change in Basin annual average day PM10 emissions through the period. The scope of this analysis extends beyond 2015. Projected growth in the PM10 baseline emissions through 2030 will impact the future year coarse fraction of the particulate mass and as such is incorporated in the estimated maximum PM10 concentrations. Lastly, the 2007 AQMP attainment demonstration was conducted for individual stations for a 2003-2005 design value. The Rubidoux monitoring site was selected as the design site for the attainment demonstration. This analysis evaluates the maximum future-year PM10 concentrations for each of the four counties in the Basin. The base-year design concentration is replaced by the maximum concentration observed in each of the counties for the period 2005 through 2007.

MODELING INVENTORIES

Table A-4-1 provides the modeling attainment inventories used to determine the future year PM10 concentrations. The inventories include for 2005 the annual average day emissions for PM2.5, NO_x, SO_x and VOC and the respective baseline emissions 2010 through 2012 (the start of the maintenance period dependent upon plan approval by U.S. EPA), 2014 (the Basin attainment date for annual average PM2.5), 2020 and 2023 (bracketing the expected horizon-year), and 2030. These emissions were used in the CAMx regional PM2.5 annual simulations to determine the relative reduction factors (RRFs) for estimating baseline future year PM2.5.

Two sets of PM10 emissions are included in Table V-4-1: the 2005 annual average day baseline emissions and the baseline for 2010 through 2030. The second set, adds 20 TPD PM10 emissions to the baseline emissions inventory for 2010 through 2030. The additional emissions are used to test the Basin capacity to maintain attainment for scenarios where additional mobile source emissions are included in the future year projections. Emissions based rollback is used to determine rollback factors (similar to RRF's) to be applied to the coarse portion of the PM10 (PM10-PM2.5) mass for future year coarse particulate estimation.

MODELING METHODOLOGY

Future year PM10 concentrations were calculated using a combination of two modeling methodologies: (1) the regional simulations of PM2.5 for baseline emissions to develop relative reductions factors (RRF) to estimate the “fine portion” of the PM10 mass and (2) baseline PM10 emissions rollback to project the “coarse portion” of the PM10 mass. The following steps summarize the analysis:

Step-1: Selection of the Alternate Design Values.

The design values used in the updated attainment modeling analyses were determined from the annual maximum concentrations monitored at FRM monitoring sites in the Basin from 2005 through 2007. The highest annual maximum PM10 concentration observed during the three years 2005 through 2007 was selected from each site to conservatively represent the potential peak concentration. (Data flagged as an exceptional event were excluded from the analysis). The data were aggregated by county and the peak concentration observed over the three year period for each county was designated as the alternate PM10 design value. The 2005 maximum PM10 concentration ($131 \mu\text{g}/\text{m}^3$) observed at the South Coastal LA County-2 monitoring station was designated as the design value for Los Angeles County. Similarly, the 2006 maximum concentrations observed at the Central Orange County ($104 \mu\text{g}/\text{m}^3$) and Central San Bernardino Valley-1 ($142 \mu\text{g}/\text{m}^3$) monitoring sites served as the representative alternate design concentrations for Orange and San Bernardino Counties respectively. The 2007 maximum PM10 concentration observed at the Mira Loma ($142 \mu\text{g}/\text{m}^3$) monitoring station was designated as the design value for Riverside county. Table A-4-2 summarizes the design value selection.

Step-2: Defining the PM Fine and PM Coarse of the PM10 Mass

The fine and coarse fractions of the site specific PM10 mass were determined by a county averaged ratio between co-located PM2.5 and PM10 annual maximum concentrations. The ratio of PM2.5 to PM10 (PM2.5/PM10) was then aggregated from station estimates to develop a county level split profile. The highest annual maximum PM10 concentration observed during the three years 2005 through 2007 for each county were then multiplied by the county level ratios of PM2.5/PM10 design values to determine the fine and coarse portion of the design mass. Table A-4-3 lists the PM2.5/PM10 ratio and the estimated fine and coarse mass for the county design values.

Step-3 Define the PM2.5 RRFs

Future year predictions of the PM2.5 portion of the maximum 24-hour average PM10 were calculated using the RRFs developed from the annual PM2.5 simulations using

the baseline emissions inventories for 2005, 2010, 2011, 2012 2014, 2020, 2023 and 2030. The PM_{2.5} RRFs were calculated from the CAMx regional modeling output for the eight sites in the Basin where speciated PM_{2.5} data were measured in 2005. (Appendix V of the 2007 AQMP describes the CAMx regional modeling and the development of the RRFs for the eight sites and the spatial interpolation throughout the Basin). The comprehensive site specific RRFs reflect the reductions due to emissions reductions in the baseline inventories applied to the individual PM_{2.5} species. The RRFs at Anaheim, Rubidoux and Fontana served as county RRF's for Orange, Riverside and San Bernardino Counties respectively. The average of the five Los Angeles County stations calculated RRFs (including Los Angeles, Long Beach, Burbank, Compton, and Wilmington) was used as representative of the Los Angeles County RRF. Future year PM_{2.5} was calculated by multiplying the estimated base year county maximum annual maximum PM_{2.5} concentration by county RRF for the milestone years. Tables A-4-4 and A-4-5 provides the station and representative county RRF'S for the milestone years.

Step-4: Define the PM₁₀ “Coarse” Rollback Factors

As a conservative approach, the 2007 AQMP held the coarse portion of the Basin particulate mass constant for the 2015 update to the PM₁₀ attainment demonstration. This modeling update extends the analysis out to 2030. The inventory projections of baseline PM₁₀ emissions from the 2005 baseline emissions levels show nominal reductions by about 1 percent by 2010 but increases for simulation years beyond 2012. Baseline PM₁₀ emissions for 2020, 2023 and 2030 show 5, 8 and 15 percent increases respectively over 2005 emissions levels. Emissions based rollback factors, calculated as the future year baseline emissions divided by 2005 emissions were generated to estimate the future year expected impacts to the coarse portion of the PM₁₀ from directly emitted particulates. Estimation of the future year PM₁₀ coarse particulate concentrations was conducted by multiplying the factors to the coarse portion of the design concentrations. Table A-4-6 provides the emissions rollback factors for the future year baseline emissions and the assumption where 20 TPD PM₁₀ is added to the 2010, 2011, 2012 2014, 2020, 2023 and 2030 baseline emissions inventories.

Step-5: Calculation of the Future Year Air Quality

Future year PM₁₀ air quality was directly calculated as the sum of the future year “fine” concentration (RRF X PM_{2.5} portion of the design .concentration) and the future year “coarse” concentration (rollback factor X coarse portion of the design concentration).

FUTURE YEAR AIR QUALITY SUMMARY

Revised PM10 Baseline Attainment Demonstration

Table A-4-7 summarizes the revised 24-hour average PM10 attainment demonstration for the baseline emissions. All counties meet the federal PM10 standard of $150 \mu\text{g}/\text{m}^3$ in all years. The 2010 predicted highest maximum concentration in the Basin occurs in San Bernardino County ($126 \mu\text{g}/\text{m}^3$). The concentration is projected to be 84 percent of the federal standard. The peak concentration predicted for 2023 and 2030 again occurs in San Bernardino at values of 128 and $136 \mu\text{g}/\text{m}^3$ respectively. The respective predicted PM10 concentrations would be 85 and 91 percent of the standard.

PM10 Baseline with 20 Additional TPD

Table A-4-8 summarizes the 24-hour average PM10 baseline attainment demonstration when the additional PM10 emissions from mobile sources (20 TPD in 2010 through 2030) are added to the future year baseline emissions. All counties continue meet the federal PM10 standard of $150 \mu\text{g}/\text{m}^3$ in all years. Nominal increases of $3\text{-}5 \mu\text{g}/\text{m}^3$ are projected for each county and year with the additional emissions however the spatial pattern remains unchanged. The 2010 through 2012 predicted highest maximum concentrations in the Basin occur in San Bernardino County ($131 \mu\text{g}/\text{m}^3$). The concentration is projected to be 87 percent of the federal standard. The peak concentration predicted for 2023 and 2030 again occurs in San Bernardino at $133 \mu\text{g}/\text{m}^3$ in 2023 and $141 \mu\text{g}/\text{m}^3$ in 2030. The predicted PM10 concentration would be 89 percent of the standard in 2023 and 94 percent of the standard in 2030.

TABLE A-4-1

2007 AQMP Updated Basin Annual Baseline Average Day Attainment
Emission Inventories (TPD)

CATEGORY	2005	2010	2011	2012	2014	2020	2023	2030
PM2.5	99.1	101.4	101.5	101.6	101.6	103.2	105.2	113.6
NOX	1093.2	774.7	742.9	711.6	653.6	525.2	506.4	511.8
VOC	844.2	572.4	559.4	547.9	527.7	498.5	495.7	508.4
SOX	53.3	39.2	40.1	40.7	42.8	50.4	55.1	71.7
PM10 Baseline	285.4	280.9	283.0	284.8	288.7	300.3	307.7	329.6
PM10 Baseline with 20 Additional TPD	285.4	300.9	303.0	304.8	308.7	320.3	327.7	349.6

TABLE A-4-2

PM10 Design Value Selection
(3-Year County Maximum in Bold)

Monitoring Location	Maximum 24-Hour Average Concentration ($\mu\text{g}/\text{m}^3$)		
	2005	2006	2007
Los Angeles County			
Central LA	70	59	78
Southwest Coastal LA County	44	45	128
South Coastal LA County 1	66	78	75
South Coastal LA County 2	131	117	123
East San Fernando Valley	92	71	109
East San Gabriel Valley 1	76	81	83
Santa Clarita Valley	55	53	131
Orange County			
Central Orange County	65	104	75
Saddleback Valley 1	41	57	74
Riverside County			
Norco/Corona	79	74	93
Metropolitan Riverside County 1	123	109	118
Mira Loma	--	124	142
Perris Valley	80	125	120
Banning Airport	76	75	78
San Bernardino County			
Southwest San Bernardino Valley	74	78	115
Central San Bernardino Valley 1	108	142	111
Central San Bernardino Valley 2	72	92	136
East San Bernardino Valley	61	103	97
Central San Bernardino Mountains	49	63	89

TABLE A-4-3

PM2.5/PM10 Ratio and Estimated Fine and Coarse Mass

County	Peak PM10 2005-2007 ($\mu\text{g}/\text{m}^3$)	Design PM2.5/PM10	Fine Mass ($\mu\text{g}/\text{m}^3$)	Coarse Mass ($\mu\text{g}/\text{m}^3$)
Los Angeles	131	0.603	79	52
Orange	104	0.595	62	42
Riverside	142	0.573	81	61
San Bernardino	142	0.486	69	73

TABLE A-4-4

PM2.5 Station Relative Response Factors (RRF) Baseline Emissions Simulations

Station	Baseline RRF Fine						
	2010	2011	2012	2014	2020	2023	2030
Burbank	0.87	0.86	0.85	0.84	0.80	0.80	0.81
Compton	0.58	0.58	0.57	0.57	0.56	0.56	0.57
Los Angeles	0.60	0.60	0.59	0.59	0.57	0.57	0.58
Long Beach	0.55	0.54	0.54	0.53	0.52	0.52	0.54
Wilmington	0.58	0.57	0.57	0.56	0.56	0.56	0.59
Anaheim	0.60	0.60	0.59	0.59	0.58	0.58	0.60
Rubidoux	0.74	0.72	0.70	0.68	0.65	0.65	0.67
Fontana	0.78	0.77	0.76	0.75	0.72	0.72	0.75

TABLE A-4-5

PM2.5 “Fine” Baseline County Average Relative Response Factors (RRF)

County	Baseline RRF Fine						
	2010	2011	2012	2014	2020	2023	2030
Los Angeles	0.64	0.63	0.62	0.62	0.60	0.60	0.62
Orange	0.60	0.60	0.59	0.59	0.58	0.58	0.60
Riverside	0.74	0.72	0.70	0.68	0.65	0.65	0.67
San Bernardino	0.78	0.77	0.76	0.75	0.72	0.72	0.75

TABLE A-4-6

Particulate “Coarse” Baseline Emissions Based Rollback Factors

Year	Rollback Factor	
	Baseline Attainment Demonstration	Baseline Attainment Demonstration With Additional 20 TPD PM10
2010	0.98	1.05
2011	0.99	1.06
2012	1.00	1.07
2014	1.01	1.08
2020	1.05	1.12
2023	1.08	1.15
2030	1.15	1.22

TABLE A-4-7Revised 24-Hour Average PM₁₀ (µg/m³) Baseline Attainment Demonstration

County	2010			2011			2012			2014		
	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass
Los Angeles	51	51	102	50	52	101	49	52	101	49	53	102
Orange	37	41	79	37	42	79	37	42	78	37	43	79
Riverside	60	60	120	58	60	119	57	61	118	55	62	117
San Bernardino	54	72	126	53	72	125	52	73	125	52	74	126
County	2020			2023			2030					
	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass			
Los Angeles	47	55	102	47	56	103	49	60	109			
Orange	36	44	80	36	45	81	37	48	86			
Riverside	53	64	117	53	66	118	54	70	125			
San Bernardino	50	77	126	50	79	128	52	84	136			

TABLE A-4-8

Revised 24-Hour Average PM₁₀ (µg/m³) Attainment Demonstration with 20 TPD PM₁₀
Added to the Baseline Emissions

County	2010			2011			2012			2014		
	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass
Los Angeles	51	55	105	50	55	105	49	56	105	49	56	105
Orange	37	44	81	37	45	82	37	45	81	37	45	82
Riverside	60	64	124	58	65	123	57	65	122	55	66	121
San Bernardino	54	77	131	53	78	131	52	78	130	52	79	131
County	2020			2023			2030					
	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass	Fine	Coarse	Total Mass			
Los Angeles	47	58	106	47	60	107	49	64	113			
Orange	36	47	83	36	48	84	37	51	89			
Riverside	53	68	121	53	70	123	54	75	129			
San Bernardino	50	82	132	50	84	133	52	89	141			

ATTACHMENT -5

U.S. EPA Approval of the South Coast Air Basin PM10 State Implementation Plan

Federal Register Environmental Documents

- Approval and Promulgation of State Implementation Plans for Air Quality Planning Purposes; California--South Coast and Coachella

APPROVAL AND PROMULGATION OF STATE IMPLEMENTATION PLANS FOR AIR QUALITY PLANNING PURPOSES; CALIFORNIA--SOUTH COAST AND COACHELLA

[Federal Register: November 14, 2005 (Volume 70, Number 218)]
[Rules and Regulations]
[Page 69081-69085]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr14no05-20]

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ENVIRONMENTAL PROTECTION AGENCY
40 CFR Part 52
[CA-314-0483; FRL-7975-7]

Approval and Promulgation of State Implementation Plans for Air
Quality Planning Purposes; California--South Coast and Coachella

AGENCY: Environmental Protection Agency (EPA).
ACTION: Final rule.

SUMMARY: EPA is taking final action to approve state implementation plan (SIP) revisions submitted by the State of California to provide for attainment of the particulate matter (PM-10) national ambient air quality standards (NAAQS) in the Los Angeles-South Coast Air Basin and the Coachella Valley Area, and to establish emissions budgets for these areas for purposes of transportation conformity. EPA is also approving revisions to fugitive dust regulations and ordinances for the areas. EPA is approving these SIP revisions under provisions of the Clean Air Act (CAA) regarding EPA action on SIP submittals, SIPs for national primary and secondary ambient air quality standards, and plan

requirements for nonattainment areas.

DATES: This rule is effective on December 14, 2005.

ADDRESSES: You can inspect copies of the docket for this action at EPA's Region IX office during normal business hours by appointment at the following location: EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105-3901. A reasonable fee may be charged for copying parts of the docket.

Copies of the SIP materials are also available for inspection at the following locations: California Air Resources Board, 1001 I Street, Sacramento, California, 95812. South Coast Air Quality Management District, 21865 E. Copley Drive, Diamond Bar, California, 91765.

The 2003 Air Quality Management Plan, which includes the South Coast PM10 plan, is electronically available at:

<http://www.aqmd.gov/aqmp/AQMD03AQMP.htm> EXIT Disclaimer

The 2003 Coachella Valley PM10 State Implementation Plan is at:

<http://www.aqmd.gov/aqmp/docs/f2003cvsip.pdf> EXIT Disclaimer

The fugitive dust rules are at:

<http://www.aqmd.gov/rules/rulesreg.html> EXIT Disclaimer

FOR FURTHER INFORMATION CONTACT: Dave Jesson, EPA Region IX, at (415) 972-3957, or jesson.david@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, ``we,'' ``us,'' and ``our'' refer to EPA.

Table of Contents

- I. Summary of Proposed Action
- II. Public Comments
- III. EPA Action
- IV. Administrative Requirements

I. Summary of Proposed Action

On July 28, 2005 ([70 FR 43663](#)), we proposed to approve 2003 plan amendments for the South Coast Air Basin (or ``South Coast''), as the plan amendments pertain to attainment of the 24-hour and annual PM-10

NAAQS.\1\ We also proposed to approve revisions to the PM-10 plan for the Coachella Valley Planning Area ('`Coachella Valley').\2\ We proposed to approve the plans'' PM-10 motor vehicle emissions budgets for purposes of transportation conformity. Finally, we proposed to approve revisions to Rules 403, 403.1, and 1186 of the South

[[Page 69082]]

Coast Air Quality Management District (SCAQMD) regulating fugitive dust emissions, and revised fugitive dust ordinances for Coachella Valley jurisdictions. These revisions update, improve, strengthen, and supplement the approved SIP provisions for control of PM-10 and PM-10 precursors in the two areas.

\1\ The nonattainment area includes all of Orange County and the more populated portions of Los Angeles, San Bernardino, and Riverside Counties. For a description of the boundaries of the Los Angeles-South Coast Air Basin Area, see 40 CFR 81.305.

\2\ The Coachella Valley Planning Area is in central Riverside County in the Salton Sea Air Basin. The boundary is defined at 40 CFR 81.305.

Our proposal was based on the following SIP submittals by the State of California:

(1) That portion of the 2003 South Coast Air Quality Management Plan ('`2003 South Coast AQMP''), including motor vehicle emissions budgets, adopted by the SCAQMD on August 1, 2003, and submitted to us on January 9, 2004, that pertains to PM-10;

(2) the 2003 Coachella Valley PM10 State Implementation Plan ('`2003 Coachella Valley Plan''), including motor vehicle emissions budgets, adopted by the SCAQMD on August 1, 2003, and submitted to us on January 9, 2004;

(3) revisions to Rules 403, 403.1, and 1186, adopted by SCAQMD on April 2, 2004, and submitted by CARB on July 29, 2004;

(4) revisions to the implementation handbooks for Rules 403 and 403.1, adopted by SCAQMD on April 2, 2004, and submitted by CARB on November 16, 2004; and

(5) revised Coachella Valley ordinances, which were adopted by the local jurisdictions on various dates in 2003 and 2004, and submitted by

CARB on November 16, 2004.

Our proposal contains detailed information on these SIP submittals and our evaluation of the submittals against applicable CAA provisions and EPA policies relating to serious area PM-10 SIPs.

II. Public Comments

We received two public comments. The first comment was from SCAQMD (e-mail from Jill Whynot, dated August 26, 2005), requesting that we annotate Table 1 ('`South Coast PM-10 Control Measures''), with a footnote updating information on certain of the measures, and Table 2 ('`South Coast Emission Reduction Commitments'), with a footnote providing an update on the implementation of measure CMB-07. We have inserted new footnote 3 in Table 1 and new footnote 1 in Table 2, below, as requested by SCAQMD.

With respect to the note on Table 1, the SCAQMD referenced material provided on Agenda Item #39 for the December 3, 2004 Governing Board meeting.\3\ The PRC-03 emission reduction commitment for under-fired charbroilers was projected to be 0.2 tons per day (tpd) of PM-10 by 2006 and 1.0 tpd by 2010. Substitute reductions come from the implementation of Rules 1186 and 403. The reductions in excess of the AQMP commitment are estimated to be 0.7 tpd starting in 2005 for Rule 403 and 0.28 tpd for Rule 1186 starting in 2006, for a total of 0.98 tpd of PM-10. With growth factors applied, the reduction is estimated to be 1.04 tpd of PM-10 in 2010. Emission reductions from these two rules are not counted in the 2003 South Coast AQMP, and thus 0.28 tpd in 2006 and 1.0 tpd of PM-10 reductions in 2010 may be substituted for the SIP commitment for PRC-03. This ensures that the plan will continue to meet the requirements for reasonable further progress and attainment.

\3\ This supplemental information is incorporated in the Docket for this rulemaking and it is also available electronically at:

<http://www.aqmd.gov/hb/2004/041239a.html> [EXIT Disclaimer](#)

Table 1.--South Coast PM-10 Control Measures
[Source: South Coast 2003 AQMP, Appendix IV-A]

Control measure No.	Control measure title	2006 reduction target in tons per day
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Remaining 2002 SIP Control Measures		
CMB-07.....	Emission Reductions from Petroleum Refinery Flares (SOx).	2.1
CMB-09 \1\.....	Petroleum Refinery Fluid Catalytic Cracking Units (PM-10, NH3).	0.1, 0
WST-01 \1\.....	Emission Reductions from Livestock Waste (VOC, NH3).	4.2, 8.7
WST-02 \1\.....	Emission Reductions from Composting (VOC, NH3).	1.2, 1.9
PRC-03 (P2).....	Emission Reductions from Restaurant Operations (PM-10) \3\.	0.2

New Control Measures		
BCM-07 \1\.....	Further PM10 Reductions from Fugitive Dust Sources (PM-10).	TBD
BCM-08 \1\.....	Further Emission Reductions from Aggregate and Cement Manufacturing Operations (PM-10).	0.6
MSC-04.....	Miscellaneous Ammonia Sources (NH3).	TBD
MSC-06.....	Wood-Burning Fireplaces and Wood Stoves (PM- 10).	TBD
TCB-01 \2\.....	Transportation Conformity Backstop Measure (PM-10).	0

\1\ These measures have already been adopted by SCAQMD. Revisions to Rules 403 and 1186 fulfill BCM-07; new Rule 1127 (Emission Reductions

from Livestock Waste, adopted 8/6/04) addresses WST-01; new Rule 1133.2 (Emission Reductions from Co-Composting Operations, adopted 1/10/03) responds to WST-02 commitments; new Rule 1105.1 (Reduction of PM-10 and Ammonia Emissions from Fluid Catalytic Cracking Units, adopted 11/7/03) meets the CMB-09 commitment; and new Rule 1157 (PM-10 Emissions Reductions from Aggregate and Related Operations, adopted 1/07/05) fulfills the BCM-08 commitment.

\2\ This measure, which is intended to achieve reductions in PM-10 after the 2006 attainment date, is discussed below and in Section II.G., Motor Vehicle Emission Budgets.

\3\ In December 2004, the SCAQMD Governing Board made a finding at a public hearing that further reductions for this category were infeasible at this time. Emission reductions from Rules 403--Fugitive Dust, and 1186--PM-10 Emissions from Paved and Unpaved Roads, and Livestock Operations, were substituted for the emission reduction commitments for PRC-03.

[[Page 69083]]

Table 2.--South Coast Emission Reduction Commitments--Commitments To Adopt and Implement New Measures To Achieve Emission Reductions in Tons per Day From 2010 Planning Inventory
[Source: South Coast 2003 AQMP, Table 4-8A]

Year	VOC		PM-10		NOX		SOX\1\	
	Adopt	Impl	Adopt	Impl	Adopt	Impl	Adopt	Impl
2004.....	2.0	0	1.7	0	3.0	0	2.1	0
2005.....	2.0	0	0	0.16	2.1	0	0	2.1
2006.....	0	4.8	0	0.86	0	0	0	0

\1\ Compliance reports from the current version of Rule 1118--Emissions from Refinery Flares, show that these emission reductions have already been achieved since 2003. Amendments to Rule 1118 currently being developed, and scheduled for consideration by the SCAQMD Governing Board in 2005, would maintain the current reductions and seek additional reductions.

As noted in our proposal, the 2003 Coachella Valley Plan contains no new control measure commitments, but relies on the adopted revisions to Rules 403 and 403.1 and the local ordinances.

The second comment was from CARB (letter from Cynthia Marvin, dated August 29, 2005). CARB pointed out that Table 8 (`Proposed Approvals

of South Coast and Coachella Valley PM-10 Attainment Plan Submittals'') contains a typographical error, in referencing contingency measure CTY-04. We have corrected this error in Table 3 ('`Approvals of South Coast and Coachella Valley PM-10 Attainment Plan Submittals'') in section III below, by indicating that the approved contingency measure is CTY-14.

CARB also asked that we note that the 2003 South Coast AQMP description of contingency measures CTY-01--Accelerated Implementation of Control Measures, and TCB-01--Transportation Conformity Budget Backstop Measure incorrectly lists CARB as an implementing agency. We have added a new footnote 1 to Table 3 below, to indicate that these two contingency measures do not apply to CARB.

III. EPA Action

In this document, we are finalizing the actions on the submittals referenced above. We are approving revisions to SCAQMD Rules 403 (except for subdivision h), 403.1 (except for subdivision j), and 1186 regulating fugitive dust emissions; revisions to the implementation handbooks for the rules (Rule 403 Implementation Handbook, Chapters 5, 7, and 8; Rule 403 Coachella Valley Agricultural Handbook; Rule 403.1 Implementation Handbook, Chapters 2, 3, 4, and 7); and revisions to the fugitive dust ordinances for 10 Coachella Valley jurisdictions. These revisions update, improve, strengthen, supplement, and replace the SIP provisions for control of PM-10 and PM-10 precursors in the two areas.

We are approving the 2003 plan amendments to the 2002 SIPs for the South Coast and Coachella Valley serious nonattainment areas, as the plan amendments pertain to CAA provisions applicable to attainment SIPs for the 24-hour and annual PM-10 NAAQS. Specifically, we are approving under section 110(k)(3) the PM-10 portions of the 2003 South Coast AQMP and the 2003 Coachella Valley Plan with respect to the CAA requirements for emissions inventories under section 172(c)(3); control measures, as meeting the requirements of sections 110(a), 188(e), and 189(b)(1)(B); reasonable further progress under section 189(c)(1); contingency measures under section 172(c)(9); demonstration of attainment under section 189(b)(1)(A); and motor vehicle emissions budgets under section 176(c)(2)(A).

The South Coast and Coachella Valley budgets are displayed in our proposed approval as tables 6 and 7 respectively, at [70 FR 43672](#). We have previously determined that these budgets are adequate (see [69 FR 15325](#), March 25, 2004), following posting of the budgets on EPA's conformity Web site: <http://www.epa.gov/otaq/transp/conform/reg9sips.htm>.

We show the plan approvals in Table 3--``Approvals of South Coast and Coachella Valley PM-10 Attainment Plan Submittals.''

Table 3.--Approvals of South Coast and Coachella Valley PM-10 Attainment Plan Submittals

CAA Section	Provision	Plan Citation	
		South Coast	Coachella Valley
172(c)(3).....	Emission Inventories...	2003 South Coast AQMP, Chapter 3 (Tables 3-1A and 3-3A); Appendix III (Tables A-1, A-2, A-3, A-5, and A-7); and Appendix V (Attachment 4).	2003 Coachella Valley Plan, Tables 2-2, 2-3, 2-4, and 2-5.
110(a), 188(e), and 189(b)(1)(B).....	Control Measures.....	Table 1 (derived from 2003 South Coast AQMP, Appendix IV-A) and Table 2 (derived from 2003 South Coast AQMP, Table 4-8A).	No new measures.
172(c)(2), 189(c)(1).....	Reasonable Further Progress.	2003 South Coast AQMP, Table 6-1.	Table 5 at 70 FR 43671 (derived from 2003 Coachella Valley Plan, Tables 2-9 and 2-7).
172(c)(9).....	Contingency Measures...	2003 South Coast AQMP, Appendix IV-A, Section 2 (CTY-01, CTY-14, TCB-01)\1\.	No new measures.
189(b)(1)(A).....	Attainment Demonstration.	2003 South Coast AQMP, Chapter 5; Appendix V, Chapter 2.	2003 Coachella Valley Plan, Chapter 3.
[[Page 69084]]			
176(c)(2)(A).....	Motor Vehicle Emissions Budgets.	Table 6 at 70 FR 43672 (derived from ``2003 South Coast AQMP On-Road Motor Vehicle Emissions Budgets').	Table 7 at (derived 70 FR 43672 from ``2003 Coachella Valley PM-10 SIP On-Road Motor Vehicle Emissions

\1\ The contingency measures do not contain a commitment by CARB.

IV. Administrative Requirements

Under Executive Order 12866 ([58 FR 51735](#), October 4, 1993), this action is not a ``significant regulatory action'' and therefore is not subject to review by the Office of Management and Budget. For this reason, this action is also not subject to Executive Order 13211, ``Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' ([66 FR 28355](#), May 22, 2001). This action merely approves state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. Accordingly, the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.). Because this rule approves pre-existing requirements under state law and does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4).

This rule also does not have tribal implications because it will not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes, as specified by Executive Order 13175 ([59 FR 22951](#), November 9, 2000). This action also does not have Federalism implications because it does not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 ([64 FR 43255](#), August 10, 1999). This action merely approves a state rule implementing a Federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. This rule also is not subject to Executive Order 13045 ``Protection of Children from Environmental Health Risks and Safety Risks'' ([62 FR 19885](#), April 23, 1997), because it is not economically significant.

In reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. In

this context, in the absence of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to disapprove a SIP submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a SIP submission, to use VCS in place of a SIP submission that otherwise satisfies the provisions of the Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. This rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: September 16, 2005.
Laura Yoshii,
Acting Regional Administrator, Region IX.

? Part 52, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52--[AMENDED]

? 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

Subpart F--California

? 2. Section 52.220 is amended by adding paragraphs (c)(333)(i)(A)(2), (c)(339), and (c)(340) to read as follows:

Sec. 52.220 Identification of plan.

* * * * *

(c) * * *

(333) * * *

(i) * * *

(A) * * *

(2) Amended Rules 403 (except for subdivision h), 403.1 (except for subdivision j), and 1186, as adopted on April 2, 2004.

* * * * *

(339) New and amended plans for the following agency were submitted on January 9, 2004, by the Governor's designee.

(i) Incorporation by reference.

(A) South Coast Air Quality Management District (SCAQMD).

(1) South Coast 2003 Air Quality Management Plan (AQMP), as adopted by SCAQMD on August 1, 2003, and by California Air Resources Board on October 23, 2003.

(i) Baseline and projected emissions inventories in AQMP Chapter III Tables 3-1A and 3-3A, in Appendix III Tables A-1, A-2, A-3, A-5, and A-7, and in Appendix V Attachment 4; SCAQMD commitment to adopt and implement control measures CMB-07, CMB-09, WST-01, WST-02, PRC-03, BCM-07, BCM-08, MSC-04, MSC-06, TCB-01 in AQMP Chapter 4 Table 4-8A, and in Appendix IV-A); PM-10 reasonable further progress in AQMP Chapter 6, Table 6-1 and in Appendix V Chapter 2; contingency measures CTY-01, CTY-14, TCB-01 in Appendix IV-A Section 2; PM-10 attainment demonstration in AQMP Chapter 5, and in Appendix V Chapter 2; and motor vehicle emissions budgets in ``2003 South Coast AQMP On-Road Motor Vehicle Emissions Budgets.''

(2) 2003 Coachella Valley PM-10 State Implementation Plan, as adopted by SCAQMD on August 1, 2003, and by California Air Resources Board on October 23, 2003.

(i) Baseline and projected emissions inventories in Tables 2-2, 2-3, 2-4, and 2-5; reasonable further progress in Tables 2-9 and 2-7; attainment demonstration in Chapter 3; and motor vehicle emissions budgets in ``2003 Coachella Valley PM-10 SIP On-Road Motor Vehicle Emissions Budgets.''

* * * * *

(340) New and amended rules for the following agencies were submitted on November 16, 2004, by the Governor's designee.

[[Page 69085]]

(i) Incorporation by reference.

(A) South Coast Air Quality Management District (SCAQMD).

(1) Amended Handbooks for Rules 403 (Chapters 5, 7, and 8) and 403.1 (Chapters 2, 3, 4, and 7), as adopted on April 2, 2004.

(B) Plan revisions for the Coachella Valley Planning Area.

(1) Fugitive dust control ordinances for: City of Cathedral City Ordinance No. 583 (1/14/04), City of Coachella Ordinance No. 896 (10/8/03), City of Desert Hot Springs Ordinance No. 2003-16 (10/7/03), City of Indian Wells Ordinance No. 545 (11/6/03), City of Indio Ordinance No. 1357 (12/3/03), City of La Quinta Ordinance No. 391 (12/2/03), City of Palm Desert Ordinance No. 1056 (11/13/03), City of Palm Springs Ordinance No. 1639 (11/5/03), City of Rancho Mirage Ordinances No. 855 (12/18/03) and No. 863 (4/29/04), and County of Riverside Ordinance No. 742.1 (1/13/04).

[FR Doc. 05-22463 Filed 11-10-05; 8:45 am]
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